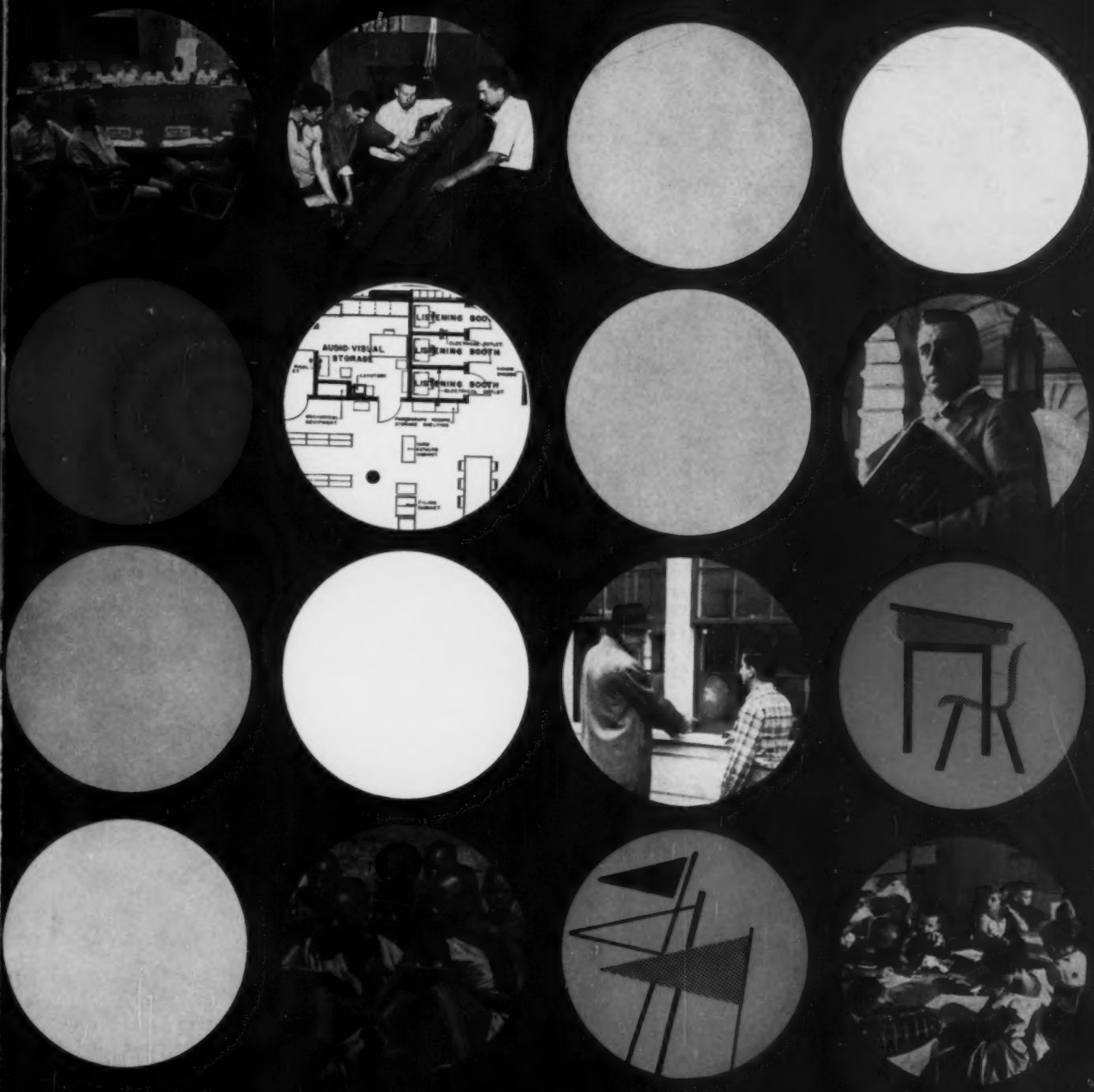
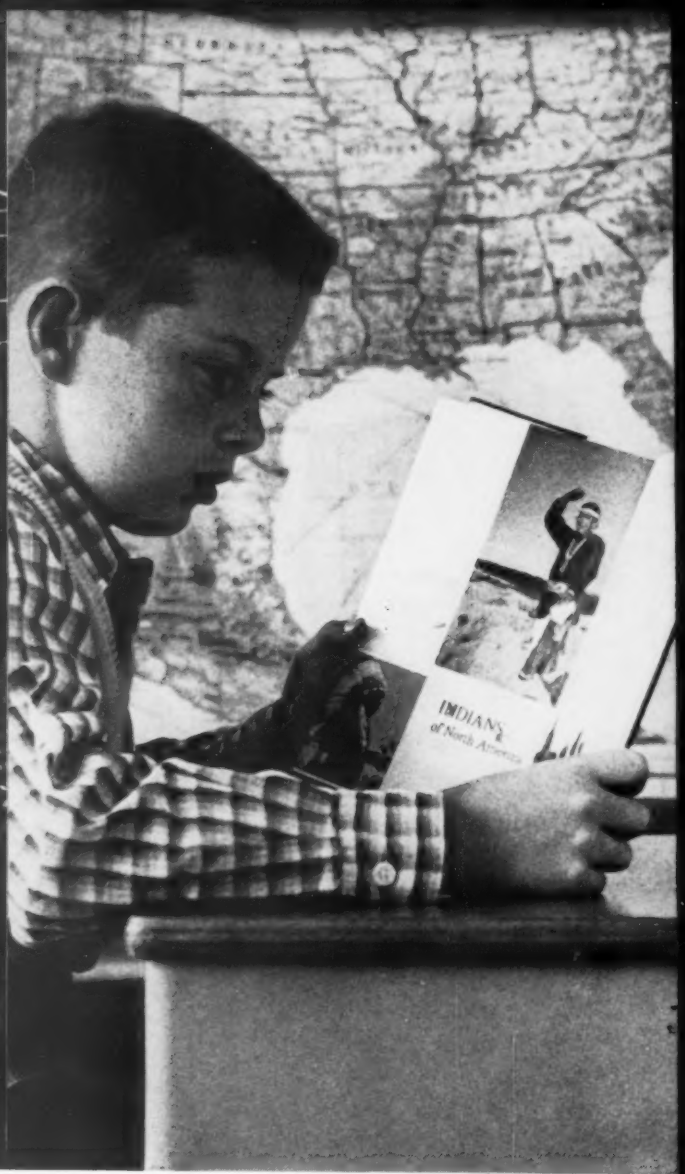
January 1960

OVERVIEW

For All Educational Executives



Mankind's Commitment to Education in 1960 page 54



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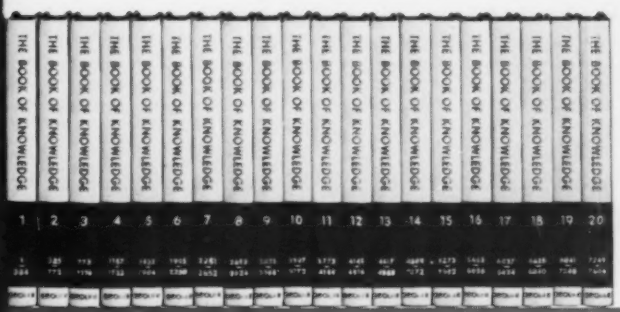

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Once over with OVERVIEW

We're new, and maybe you'd like a guide to interpret the view from your vantage point.

Our cover is meant to suggest the many spheres of interest we mean to explore. Within the frame of our covers, our landscape has a major center of interest and a number of eye-catchers scattered across it. In the major article section, starting on page 41, we focus on a complex of challenges—administrative theory, practical help in planning plant, a forecast for vocational education, education in industry, and a delightful plane's-eye view of educational commitment around the world—all designed to inform and help you, whatever your administrative role.

The forward section is heavy on point-of-view—letters, where your views get an airing, the views of the editor and the economic analyst, and the wry comments of Benedict Burr. Also up front are reports of research studies and an insert of late news.

Beyond the major articles the landscape is dotted with special features like plant, communications clinic, people, products, book reviews, news round-up, and a report from our Washington correspondent. Walter Cocking's page is the high point in this section. Our advertisements scatter through the issue like neighborhood stores. Do some window-shopping along the way.

We finish with a bang: a delightful feature called How Executives Relax, and a last-page "surprise" which, this month, is a provocative piece by the head of a fine private school.

Of course we hope we've caught the spirit of OVERVIEW with its promise of broad perspective alternating with the practical and immediate. The need for an overview of educational problems was well stated by Dr. Thomas Hale Hamilton, new president of the State University of New York, who recently told a group of school superintendents: "A major . . . weakness in our education is its segmentation . . . horizontally by the unnatural splitting of knowledge into smaller and smaller compartments, and vertically by . . . elementary, secondary and higher education boundaries as inviolate as those of sovereign states. Yet nothing could be . . . better designed to weaken the total impact of the educational enterprise. . . . Truly, let an elementary school any place be wounded and some place, some time, a college will bleed."—A.B.S.

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January 1960

OVERVIEW

For All Educational Executives

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41 Vocational Education Outlook for the 60's

By M. D. Mobley. Automation and the population explosion hold special meaning for the course of vo-ed programs during the coming decade. Here are predictions of changes to come by the head of the American Vocational Association.

44 Education at Work

Matthew J. Pillard tells where some of the nation's most intensive educational activity is being conducted today—in the "hidden classrooms" of its business and industry. The programs he describes range from on-the-job skill development to top-management seminars.

48 New Forces in School Administration

Daniel E. Griffiths describes the new problems, new theories and new methods of instruction that are changing the job concept of today's educational executive.

52 Laymen Specialists Recruited for Preventive-Maintenance Program

By Arnold Bloom. Case study of Cleveland Heights' (Ohio) planned program of school maintenance which has saved the community thousands of dollars. This is the first in a series of articles on maintenance practices.

54 Mankind's Commitment to Education in 1960

Belmont Farley writes this month's Overview special—an airplane view of school organization and practice in Uganda, the Soviet Union, Western Europe, South America and the United States. More than half of the people on the globe cannot read or write in any language, but the people of the world, independently and yet in a unified way, are bent to the task of making the benefits of civilization available to the human race. The range of their problems and the degree of their commitment is one of the exciting stories in education today.

66 How Do You Plan What to Tell the Architect?

Charles D. Gibson, a noted school planner, suggests the ideal way to communicate with your architect. Here are important do's and don'ts for every executive who foresees plant expansion.

70 The Span of the Educational Spectrum in the United States

By Harold F. Clark. Four vast systems of education are coping with problems, championing causes and contributing to the progress of the nation.

126 Don't Pity the Teacher . . .

Richard H. McFeely says pity the children, the real victims of the inadequate financial support that plagues our schools. Overview closes the issue with this provocative message.

74 As I See It Predictions and Portents by Walter D. Cocking

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Ideas that Work

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123 How Executives Relax Bruce Miller's Mountain Retreat

If, as a member of a school administration, you're asked to help decide on the purchase of typewriters . . . in effect, to act as a part-time purchasing agent . . .

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LETTERS

These letters are a few of the many occasioned by the Pilot Issue, which had very limited distribution recently. Comments are always invited and welcome. Unless you direct otherwise, we should like to share any views of general interest with our readers.—A.B.S.

Would be catastrophic to reach excellence on a pilot issue!

REV. RAYMOND A. ADAMS, Prin., Rice Memorial High School, Burlington, Vt.

Closed Circuit TV—Coverage is general and encourages inaccurate assumptions. I don't question the writers ability. Enough space was not given to him. Better a thorough job than one as shallow as this.

GEORGE W. GIBSON, Dir., A-V Education, Grad. School of Business Administration, Harvard.

I like very much the objective of introducing a magazine for educational executives. About time all executive problems are given the chance to stew in a common pot.

Closed Circuit TV—An excellent briefing on a new development about which most executives, who don't live in Hagerstown, know too little.

Enrollment Explosion—Valuable for the excellent organization and presentation of statistical data on a critical problem. Found the data of immediate usefulness.

Span of Educational Spectrum—Provided information not generally known among school executives.

I believe these three articles suggest a possible formula for future issues—articles which provide valuable statistics, relatively unknown information and good briefing.

Educational Image—This article failed to translate the four present realities into future images in the manner I anticipated.

General comment: As a young superintendent I grew up with, courted and married The School Executive. As an old one, I'm ready and willing to seek a divorce and settledown with a full-blown, exciting Miss OVERVIEW.

G. E. RAST, Supt. of Schools, Westport, Conn.

Thanks, Gerry. But see Albright, Aukerman and Marchel below!

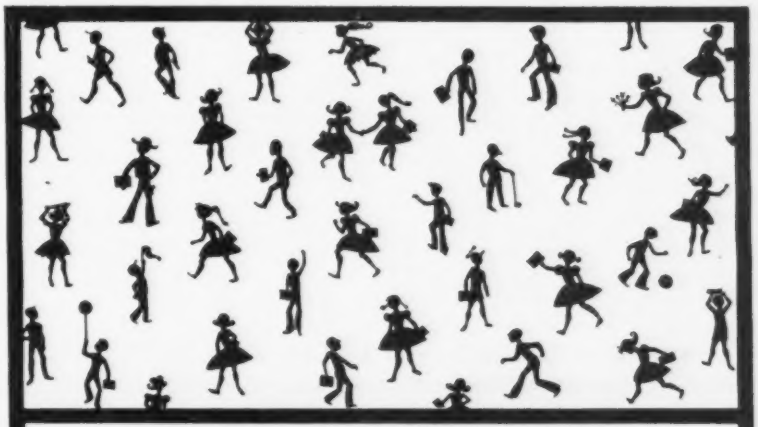
. . . The *Stampede* article went to the point, had some meat and was interestingly and readably written.

The article on "College President" was superficial and "preachy" . . . . There are numerous other more adequate treatments.

The *Image* article left me without an image of education or the administrator; perhaps dealing with one or the other would have knitted the fabric; or maybe a different title.

The purpose is laudable, timely and desirable. I expected a some-

OV-207



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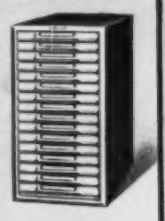

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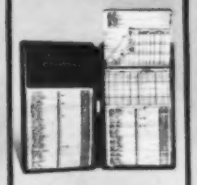

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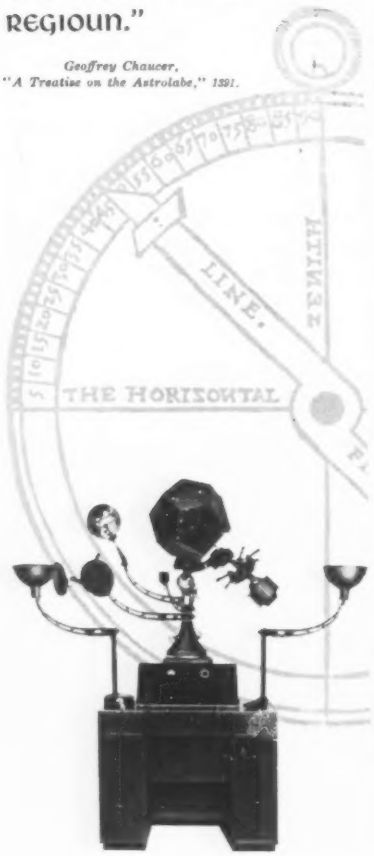
OV-208

"...truste wel that alle the conclusions that han be founde, or ellys might be founde in so noble an instrument as is an astrelabie ben unknowe parfitly to eny mortal man in this regioun."

Geoffrey Chaucer, "A Treatise on the Astrolabe," 1391.



Chaucer's treatise, written for his son, explained the most advanced scientific astronomical instrument of the time, the astrolabe. Today's "mortal man"—and child—have the privilege of studying astronomy and the space sciences with the aid of the precision engineered Standard Model Spitz Planetarium.

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what variant publication to achieve the lofty goals set forth by the publisher in his "memo."

A. D. ALBRIGHT, Exec. Dean, Extended Programs, U. of Ky.

Educational Image seems to me to have made a penetrating analysis of important trends—more than straws in the wind. . . .

Am a bit surprised, especially since this is a pilot issue, that more writers were not used. All the articles I read struck me as good, but there isn't a scarcity of fine writers, is there?

ROBERT D. BALDWIN, Prof. of Educational Administration, W. V. University, Morgantown

Educational Spectrum is brief . . . A chart would have been serviceable. The facts given are helpful.

Enrollment Explosion is particularly good because "why" was included as well as "what." Sources were given. The author planned this useful article consistently and well.

Adult Education Stampede served to orient the reader to a position where future articles could be easily understood.

Educational Image is opinionated out of proportion to the facts presented (in my opinion). The author could have stayed with either education or educators and have done a better job.

ROBERT K. MARCHEL, Supt., School District 25A, Pocatello, Idaho

The Educational Spectrum and *Educational Image* are two of the finest articles I have ever read in professional publications. They are visionary in content, concise and pleasantly free from "pedagese."

DALE K. HAYES, Chairman, Dept. of School Administration, U. of Neb.

Rast agrees with you about the Spectrum.

Educational Spectrum, Enrollment Explosion and Adult Educa-

OV-209

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tion Stampede are all factual and significantly up-to-date. *Educational Image* contains loaded phrases, inaccurate generalities and is disappointing.

ROBERT C. AUKERMAN, Prof. of Education, U. of Rhode Island, Kingston

Read Baldwin's and Hayes' comments!

Educational Image is excellent material for helping to shape up and define purposes to be sought in the years immediately ahead. These are fundamental data for educational planning.

Enrollment Explosion makes a terrific impact but I felt that it would have been of greater help if the implications had been more fully and comprehensively treated. Perhaps this is asking more than is possible of even a major feature.

ALLAN P. BRADLEY, Dist. Supt. of Schools, First Supervisory Dist., Bedford Hills, N.Y.

"Feeding One Sixth of the Nation" is an 8-page insert in the Pilot Issue. Reprints in limited quantities are available without charge.

Feeding One Sixth of the Nation—I'm against it!

WILLIAM J. HENDERSON, Director of Education, Associated Industry, St. Louis.

School lunch is my business. I would like to know who wrote the article. It gathers information that cannot be found except by research.

ALETA E. SWINGLE, Dir., Food Services, Public Schools, Wash., D.C.

I believe the space devoted to and cost of printing for the article on lunchroom feeding was wasted. While this is an item of concern to public school administrators, it does not deserve this kind of treatment in a magazine. There are many areas of concern which are more crucial.

C. NEALE BOGNER, Dean, School of Education, Miami U., Oxford, Ohio

Feeding the Nation is a fair article. It needed more sparkling information as "Why do kids eat what they do?" "What foods are to be bought—why?"

HOWARD C. REICH, Prin., Portland, Maine H. S.

Feeding One Sixth of the Nation—I do not feel that this article really answered the "how." . . . I doubt that the article offers specific procedures or stimulates much thought.

DONALD K. COBB, Ex. Head, Monroe Local School District, Lewisville, Ohio

Feeding One Sixth of the Nation—An excellent overview of the national school lunch program I would like to have my graduate students read.

WILLIAM L. GARTER, Assoc. Prof. of Educational Administration, U. of Cincinnati

OV-211

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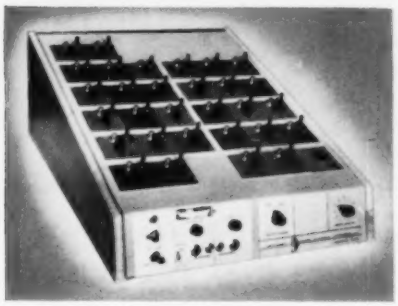
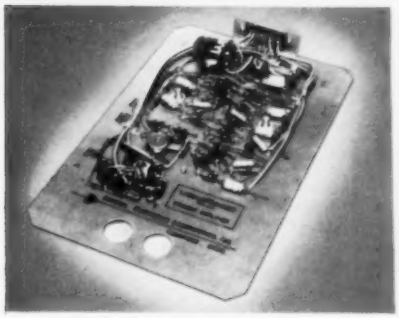
ELECTRONIC LANGUAGE LABORATORY SYSTEM*

The Remote Control Cabinet (top half shown) contains all electronics and tape recorders that are normally placed at each student position.



The Teacher's Console contains controls for tape recorders, channel selection, monitoring, and for making master tapes.



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*Patents pending

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OV-213

LARGEST POWER-OPERATED GYM SEAT INSTALLATION IN THE COUNTRY!

Seating May Set Pattern For Future

Seating in the new Rock Island High School Fieldhouse may become a model for buildings of this type throughout the nation.

The main sections of bleachers, which can be opened and closed simply by pressing a button, are the largest installation of this type to be installed in any building in the United States.

The manufacturer of the bleachers, Medart Seating Co., St. Louis, has been using the Rock Island installation to show customers. The Rock Island installation may be advertised in trade journals to show the use of retractable seating in a building of its size.

Located along the east and west walls of the fieldhouse, the main sections of bleachers range from 70 to 75 feet wide. These sections on both the main playing floor and balconies may be opened and closed in a matter of minutes from a central control point. The bleachers are moved by electric motors.

Never before have retractable bleachers been used in such large sections, according to Benj. A. Horn, architect.

Seat 6,110 Persons

The bleachers to seat 6,110 persons were installed at a cost of about $90,000. This type of seating was purchased to give the maximum use of floor space for physical education classes.

Risers on the new bleachers are treated with a pigmented varnish to make their color lighter to blend with the attractive light colors predominating the fieldhouse. This pigmented varnish will prevent the bleachers from turning dark in years to come.

This is also the first time that this type of bleachers has been treated with the pigmented varnish, Horn said.

The installation of this type of seating in the new fieldhouse is an indication of the farsightedness of the Rock Island Board of Education, Horn commented.

Reprinted from
Rock Island Argus
Rock Island, Illinois
September 16, 1959

ROCK ISLAND
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Rock Island, Ill.
Benj. A. Horn, Architect
Rock Island, Ill.

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makes sense in gym seats!

Open in seconds . . . at the turn of a key! No muscle power, no noise, no binding, no damage to seats, walls, floors.

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ONE VIEW

basic education and the tough curriculum

Archibald B. Shaw

WE'RE FOR QUALITY in education. We applaud excellence as a value goal. We think we're going to be for basic education and for the tough curriculum, too, but we're not ready to sign up yet. We're waiting for much better definitions of these terms than any we've seen. Some of our highly respected friends say that basic education and the tough curriculum can't be spelled out in ways which are acceptable both to the present proponents and to those whose profession it is to secure for every child the opportunity for appropriate education. We're more hopeful.

The definition almost surely won't come from those making the proposals now, thoughtful and concerned though they are. Neither will it come from citizens committees, nor from legislatures, nor even from school boards. Scholars, as the term is generally used, won't furnish it. These groups may set the goals of education and define the roles of the various educational levels, but to ask them to prescribe the process or to define the daily learnings which build toward the desired outcomes is like asking Admiral Rickover how to raise wheat.

Who will give us the definition? It seems reasonable to look to those who are "skilled in, occupied with, make a practice of, adhere to, give allegiance to," education —in short, the educationists. If we understand our dictionary correctly, we mean people who profess the cause of education, who know something about how people learn, about the kinds of situations most conducive to learning, about what learning is relevant and contributes most effectively to the goals of the individual and society, and who know how much is not known. "Educationist" is a term used slightingly but it should be claimed proudly if the derivative meaning of the word has not been too greatly distorted.

Because responsibility sobers and wisdom makes humble, those who lead our educational enterprises are much less certain than their critics about how to achieve basic education and a tough curriculum. This is good. Their definition will be the better because of their responsibility and wisdom.

Tough for whom? Tough for what? Wire grass is tough, we're told, but cattlemen seem to think that the muscles it develops aren't relevant, are even harmful to the development of fine beef. Pemmican is tough, too tough for an infant until it has been chewed and broken down by the loving mother in the culture where pemmican is an important food.

The course in which a majority of the students fail may be tough or it may be just as irrelevant as the wire grass. Or it may require a level of development which most of the students haven't reached. Or perhaps the test of the learning was a very poor instrument. Or it may have been poorly taught. Every experienced administrator knows from painful experience that when a teacher fails a large number of students it may be just that—teacher failure.

No course is equally tough for all students. It may be impossibly impervious to some, yet be pre-chewed pemmican to others.

So as we move toward a definition we rule out a label for any particular subject or curriculum, and turn toward the relationship between the student and the curriculum. We may discover that by "tough" we mean mind-stretching, or challenging. Challenging implies a possibility of success and of failure, a stimulation to action, an assurance of the worth of success and a feeling of satisfaction in success, or of dignity in failure. But this is only the beginning of a definition. What is the challenging curriculum?

What is basic education? Is it an education designed for the "good" student? By "good," do we mean those who could have gotten pretty good marks in the courses Mr. Fadiman took in his high school days? What is basic for all students? By basic do we mean necessary for the welfare of every American and for American society? These are just a few of the tough basic questions that need answers before we can come to a satisfactory definition.

Yes, we think we're going to be for basic education and for the tough curriculum, but not until we hear them spelled out in ways that are consistent with what is known about learning and compatible with the great ideal of the worth and dignity of the individual.

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JANUARY

12–14, Assn. of American Colleges. At Boston. Ex. dir: Dr. Theodore A. Distler, 1818 "R" St. NW, Washington, D. C. Theme: Will Colleges of Liberal Arts and Sciences Survive?

FEBRUARY

10–12, National Society of College Teachers of Education. At Chicago. Ex. sec: Elmer J. Clark, Indiana State Teachers College, Terre Haute, Ind.

10–13, American Assn. of Colleges for Teacher Education. At Chicago. Ex. sec: Dr. Edward C. Pomeroy, 1201 16 St. NW, Washington 6, D. C.

12, Comparative Education Society. At University of Chicago. Ex. sec: Dr. Gerald H. Read, Kent State University, Kent, Ohio.

13–17, American Assn. of School Administrators. At Atlantic City, N. J. Ex. sec: Dr. Finis Engelman, 1201 16 St. NW, Washington 6, D. C.

15–17, American Educational Research Assn. At Atlantic City, N. J. Ex. sec: Dr. Frank W. Hubbard, 1201 16 St. NW, Washington 6, D. C.

16, Educational Press Assn. of America. At Atlantic City, N. J. Ex. sec: Dr. Mildred S. Fenner, 1201 16 St. NW, Washington 6, D. C.

27–Mar. 2, National Assn. of Secondary School Principals. At Portland, Ore. Ex. sec: Paul E. Elicker, 1201 16 St. NW, Washington 6, D. C.

29–Mar. 4, Dept. of Audio-Visual Instruction. At Cincinnati, Ohio. Ex. sec: Dr. Anna L. Hyer, 1201 16 St. NW, Washington 6, D. C. Theme: Concentrating Educational Forces.

MARCH

6–9, Assn. for Higher Education. At Chicago. Ex. sec: G. Kerry Smith, 1201 16 St. NW, Washington 6, D. C.

6–10, Assn. for Supervision and Curriculum Development. At Washington, D. C. Ex. sec: Margaret Gill, 1201 16 St. NW, Washington 6, D. C. Theme: Social and Cultural Influences on Education.

21, Child Study Assn. of America. At New York City. Ex. dir: A. D. Buchmueller, 9 E. 89 St., N.Y.C. Theme: Mass Media—Their Impact on Children or Family Life in Our Culture.

26–30, Dept. of Elementary School Principals. At St. Louis, Mo. Ex. sec: Robert W. Eaves, 1201 16 St. NW, Washington 6, D. C.

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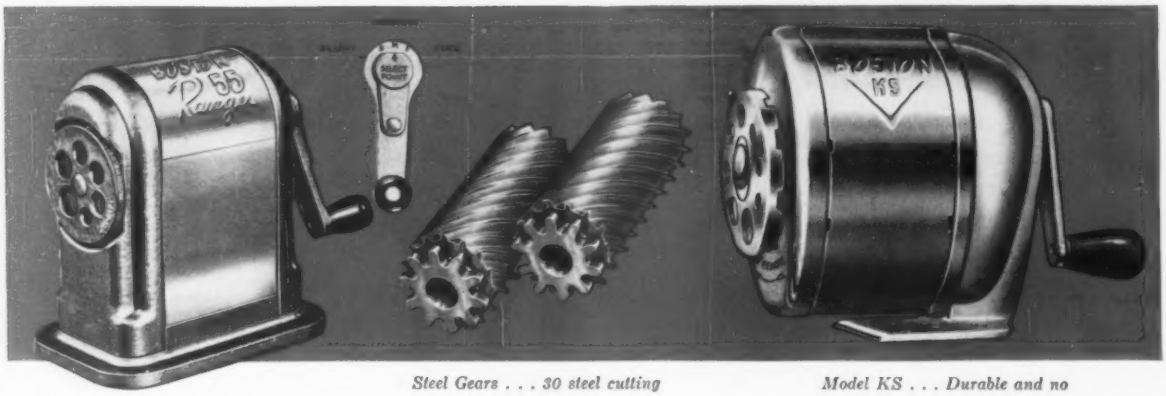

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LATE NEWS INSERT

For more complete coverage, see pages 109–121.

POLITICAL FOOTBALL: When Congress reconvenes on Jan. 6, in this presidential election year, no one will be making any predictions about the outcome of proposed education legislation. Only one thing appears certain: that education will again be a political hot potato tossed back and forth between the two parties.

Representatives of both parties look to President Eisenhower to play a decisive role in the final outcome. They agree that if any legislation is to be passed, it will require his unqualified support. And up to now, the President has been decidedly cool towards any direct federal financial aid to schools.

The only plan proposed by the administration in the last session of Congress involved long-term loans to help communities pay off school construction debts. Since no immediate outlays of cash were required, the plan would have no effect on President Eisenhower's efforts to balance the budget.

However, House Education Committee members have come up with a compromise which they feel may win the necessary support. Chairman Cleveland M. Bailey (D.-W. Va.) and Rep. Carroll D. Kearns (R.-Pa.), ranking Republican on the committee, anticipate strong opposition to the compromise, especially from liberal House Democrats. In spite of this, they predict "enough strength" to win committee approval and congressional passage of the proposed substitute if the White House agrees.

Both stated they would jointly introduce the revised bill in January only if they receive assurances that the Eisenhower administration will accept it.

The proposed compromise goes far to meet many of the President's objections to the bill reported out by the Committee last June which called for a $4.4 billion program to help states build schools and pay teachers. In essence, it is a compromise between this bill, the President's long-term loan proposal, and a third measure introduced in the Senate which would have provided $500 million a year for two years in grants for school construction.

The new compromise keeps the administration's basic insistence on long-term loans. But it would also provide for grants in some instances and short-term financial loans on a matching basis. It would permit communities as well as states to provide the matching funds. Removed would be the administration's proposed requirement that states must demonstrate a "reasonable tax effort" before receiving assistance.

* * *

COLLEGE ENROLLMENTS HIT PEAK: Enrollment of full-time and part-time students in the nation's colleges and universities at the beginning of the current scholastic year reached the all-time high of 3,402,297, the U. S. Office of Education has announced.

The 1959 enrollment exceeds that of 1958 by 143,741 students, or 4.4 percent.

According to the USOE, this is the eighth consecutive year that new records were set in fall enrollments. Figures do not include non-degree students.

* * *

BOND SALES DOWN: The decline in school bond sales, recently reported by Secretary of Health, Education, and Welfare Arthur S. Flemming, assumes more serious proportions when compared with figures just released by the Investment Bankers Association in Washington. IBA figures show that while school bond sales have been sagging, sales of all other types of municipal improvement bonds increased in the first ten months of 1959.

Flemming's report placed total school bond sales in the 12-month period ending in September at $1.9 billion. This is 20 percent less than the amount purchased in the preceding year. This downward trend will aggravate the existing shortage of classroom space, the Secretary said, because it indicates curtailed construction programs in the months ahead.

IBA research director Frank E. Morris says the decline in school bond sales is attributable to a slackening off in the rate of growth of school populations. Although enrollments are still growing, he pointed out that the increases weren't as sharp as in the mid-1950's and this has exerted a slowing up influence on the school bond market.

"There is less need for new schools now than earlier in the decade," he stated.

Morris was firm in his belief that the decline in bond sales was not attributable to higher interest rates and said the decline started early in 1958—in an easy money period when interest rates were dropping.

Population projections predict that by early in the 1960's, the population will again start to increase at a rapidly expanding rate. Morris feels that by the mid-1960's this will make itself evident in a spurt in school bond sales and construction.

* * *

TERMINATES ACTIVITIES: After more than 10 years of service, the National Citizens Council for Better Schools announced the termination of its entire program at the end of December, according to John Hersey, interim chairman. The move, following an earlier curtailment of activities, was made because the initial goals of arousing citizen interest and helping

communities organize for school improvement have been substantially achieved, explained Hersey.

The Council has designated the National School Boards Association in Evanston, Ill., to take over many of its public information functions, including maintenance of its clearinghouse of information.

* * *

STUDENT SAFETY DISCUSSED: Discoveries of vital importance for all those concerned with student safety are discussed in "Operation School Burning," the recently-published report on the series of school fire tests conducted in Los Angeles this past summer.

Tests of "untenability" caused by smoke and heat show an extremely narrow gap between the fire's start and the time corridors become untenable. The gap is shorter than previously believed and underlines the importance of speedy alarm and evacuation.

The report has been called "must" reading for anyone responsible for the protection of life in educational buildings. Its 6-page conclusion presents findings which emphasize the need for a new look at fire warning and building evacuation procedures.

The book, published by the National Fire Protection Association, 60 Batterymarch Street, Boston 10, is available at $4.75.

* * *

ANNOUNCE GRANTS: The National Science Foundation has awarded grants totaling $9.2 million to 33 colleges and universities to support Academic Year Institutes for science and mathematics teachers. This will be the fifth year of the program, designed to help teachers improve their subject matter knowledge through a year's advanced study on a full-time basis.

It is anticipated that 1,600 experienced teachers will be enrolled in the Institutes in the 1960–61 academic year—the great majority, secondary school teachers. A limited number of openings for college teachers will also be available in some of the Institutes.

The Foundation grants will provide stipends of $3,000 for each participant, with additional allowances for dependents, books, and travel. Some Institutes will provide an additional summer training program to enable teachers to fulfill graduate degree requirements more easily.

Information and application forms can be obtained from directors of individual Institutes, not from the National Science Foundation.

* * *

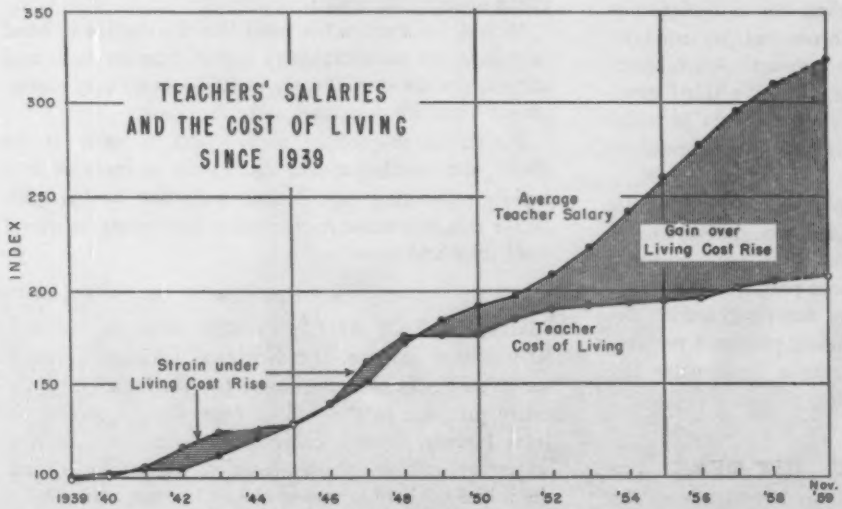
SEEK TV TIME: The National Education Association has urged the Federal Communications Commission to require that a fair portion of the prime evening television viewing period be devoted to public service broadcasts, including those with educational values.

NEA president Walter W. Eshelman told the commission that public service broadcasts in the 7 to 10 p.m. period might be regarded as fair compensation by the stations for the use of the air waves which belong to all the people. Since stations are licensed to use the air waves "in the public interest, convenience, and necessity," he urged the Commission to strengthen the standards by which it measures whether the applicant stations have functioned in the public interest.

* * *

POTPOURRI: Kent State University, Kent, Ohio, is running a short course in "basic boardsmanship for beginners" Jan. 8–9. . . . A language barrier between 200 Spanish-speaking workers and other employees of the Hatfield Wire and Cable Co. in Hillside, N. J., is gradually being broken by lessons in Spanish being given to 24 foremen and other supervisory employees. . . . The relationship between supporting good schools and attracting new industry was brought out by William B. Papier, research director of Ohio's Bureau of Unemployment Compensation. Speaking to the Ohio Association of School Administrators, he said that the state's best bet for attracting new industry is better schools and expanded research facilities.

* * *



TEACHERS' SALARIES: The index of teachers' salaries stood at 324.1 in November; the cost of living index was 207.9. As the 2-decade span charted at left shows, from 1940–1950 there was almost no growth in the real income of teachers, but from 1950–60 real wages rose about 40%. In the 1960's teachers' real wages will continue to climb.

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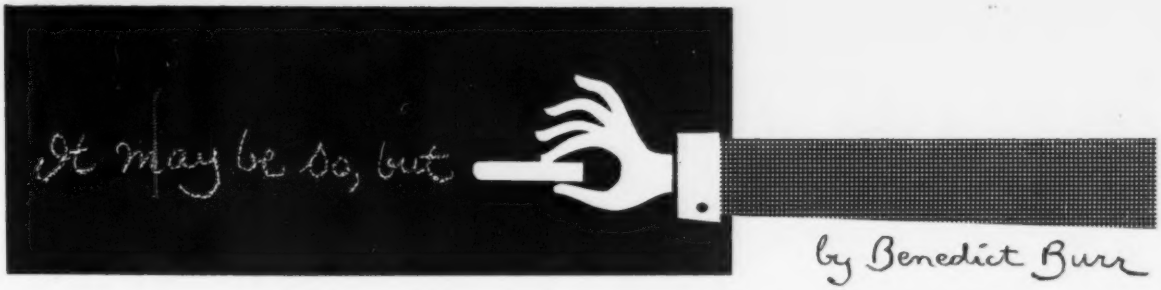

by Benedict Burr

IT SEEMS THAT THE great revival of headcramming in American education suffered a setback as a result of the recent TV quiz exposé. Apparently sham can parade as wondrous wisdom, born of devotion to intellectual detail. But now the halo of such respectability is painfully askew. Even the spelling bee is suspect! And another tantalizing reward for effort has thus vanished from the classroom. There is now stronger need for other techniques and motivations to propel our "pursuit of excellence."

If "a little knowledge is a dangerous thing," no one in our land should be victimized. Well, what can we do? Perhaps we shouldn't permit any more curricular distractions by realists, behaviorists, pragmatists or educationists. What if a crash program for building the encyclopedic mind is difficult and expensive? Inevitably there will be casualties, but for them society has provided costly facilities for bed and board in corrective and custodial institutions!

There was a good curriculum once, but it seems to have been subsequently spoiled by a lot of misguided teachers. Because they had faith in research and tried to apply the findings, they have permitted a sort of educational snafu to come about. What can we expect when these educators let a mere philosopher like John Dewey influence them.

Dewey was a clever thinker, and he managed to gain world-wide renown in a pre-television era. He knew a lot about things like how the educational process relates to human behavior, but he couldn't build an atomic submarine, much less a space ship, so what good was he? Furthermore, he was even opposed to headcramming. For shame!

How fortunate that we have some powerful arguments for persuading our youth to submit willingly to a stern educational regimen. First of all, national defense makes a strong bid—any redblooded adolescent can see the urgency of a well-stocked scholastic arsenal. Even more appealing an enticement is the exotic quest for space control.

Sometimes, however, the exigencies and temptations of adulthood tend to divert creative efforts; would-be scientists sometimes turn sloppily sentimental and inept. Think of all those shirkers who become nurses, policemen, waitresses, truck drivers, secretaries, farmers, merchants and mechanics. They and others like them may constitute the so-called backbone of a democratic society, but they simply fail to advance space-age developments. Headcramming, however, would wake them up early and get them into the real swing of things.

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Now a small problem arises here. The urgent need for America to advance forthwith from runner-up to pacemaker in the space rat-race seems to require selective concentration of educational effort on the academically talented top 15 percent. Logic dictates that only the best teachers, also the top 15 percent, should groom these scholars. But, how can we make sure that the remaining 85 percent (staff, students and parents of the latter) will support such a plan with enthusiasm?

Well, the latter students will not be neglected. Guidance will help prepare them for their roles as scientifically initiated flunkeys. They will know what's important and where their interests should be concentrated, instead of running around being policemen and nurses and such and never contributing to their larger duty! As for the teachers, "master teachers" on TV and in lecture tours can bring the important lessons to the masses, while this 85 percent stands by and hopes to emulate.

There is still another enticement for convincing youth that stiff cerebral exercise is rewarding. Impressive statistics suggest a direct relationship between educational endurance and subsequent material opulence. QUANTO DISCIS TANTO STIPENDIA MERES. Translated (for the benefit of the less able 85 percent among us) this means, "The more you learn, the more you earn." How can youth resist such a clincher?

But when we have overcome the obstacles now impeding the headcramming crusade in our schools and colleges, we still mustn't be complacent. We must not submit to the diversionary efforts of psychologists, philosophers, anthropologists, sociologists and their ilk among the behavioral scientists.

Regardless of the abundant research to the contrary:

A. It is unnecessary to make curricular adjustments in accord with inherent differences of human characteristics. A single pedagogical prescription, preferably dosed out nationally, is applicable to all students.

B. Erudition virtually guarantees intelligent, socially effective behavior. Mastery of mathematical processes, for example, makes Johnny a precise thinker, a well-adjusted boy. Popular allegiance to the resurrected "transfer of training" doctrine assures its validity.

Back to our intellectual gymnastics, everyone, lest sanity overtake us. If the struggle is laborious, the virtue is thus enhanced. AD ASTRA PER ASPERA; and no aspirin to relieve the aspera!

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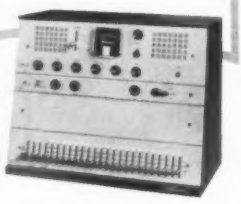

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ECONOMIC

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The 1960's open with a national income of about $500 billion and will probably end with a national income well above $750 billion. In 1960 expenditures on schools and colleges should be about $20 billion; in 1970 they will be well above $40 billion. Total expenditures for education, research, development and training in all forms of education will be about $45 billion in the beginning years of the decade and well above $100 billion at the end of the decade.

Rising Enrollments

School and college enrollment in 1950 was 31 million. At the beginning of 1960 it is about 45 million. The total school enrollment seems to be increasing somewhat more than 2 million a year at present, and this promises to continue through the 1960's. In 1970 we may have at least 20 million more enrolled than in 1960—an increase which about matches the *total* number enrolled a generation ago. Enrollments are growing faster proportionately in the upper age levels: elementary enrollments will go up about one-fourth, secondary schools up nearly three-fourths, while enrollment in higher education will almost certainly double.

Building Needs

There is no question that there will be a boom in buildings and equipment for all kinds of education during the next decade. To meet the needs there should be finished every day, ready for occupancy, four or five elementary schools for 600 pupils, two or three high schools for 1,000 pupils, and a college plant for 1,400 to 1,800 students. When we add the number of new buildings necessary because of obsolescence and population shifts, it is entirely possible that this number will double. It is already clear that there will be a great expansion in the educational programs carried on by industries and by voluntary groups of all kinds.

Demand for More Teachers

The provision of an adequate number of teachers and other professionals to staff these schools and colleges is a large and growing problem. Just to provide one additional teacher for every 30 students (and present recommended practice is 50 professionals for each 1,000 students) would take 66,000 additional teachers each year. By the end of the decade close to 200,000 new teachers will be needed for annual replacements and retirements. This means that somewhere between 250,000 and 300,000 new teachers will have to be available each year to meet our growing enrollments. Any such number would re-

SCENE

quire a very large fraction of the college graduates, and it may be a higher proportion of college graduates than we are likely to be able to obtain in 1970.

Paying for Services

The average family income in 1960, before taxes, will probably be about $6,500. By the end of the decade the average family income will likely have passed the $10,000 bracket (in 1960 prices). While dollar expenditures on food, housing and clothing will increase, the percentage expenditure on these items per family will probably drop and the percentage that is spent on services of all kinds will rise. This is because we shall know how to increase the efficiency of material production (particularly in the fields of agriculture and manufacturing through the work of agricultural experimental stations, engineering colleges and research departments in industry), while knowing little about the problems involved in increasing the efficiency of, say, a hospital or a school.

To illustrate the contrast, look at the process of selling yard goods. Today's department store is essentially like a bazaar in ancient Egypt: a pile of cloth on the counter, a clerk on one side, a buyer on the other. But the process of manufacturing this cloth would be completely beyond the ancient Egyptian's comprehension.

Efforts of Increased Efficiency

Because of the enormous size of the construction program and the demand for increasing numbers of teachers, there will be strong pressure to increase efficiency in education. Output per man hour in agriculture has doubled during the past two decades. Output per man hour in industry has doubled during the past three decades. No one has satisfactory figures on the increase in output per man hour in education, but it would probably be very difficult to show any substantial improvement during the past generation.

As this pressure develops it will force attention to educational equipment of all kinds which will, in turn, increase the efficiency of the teacher. Today the overwhelming proportion of the construction dollar goes into the shell of the building, while relatively little goes into that which might increase teaching efficiency.

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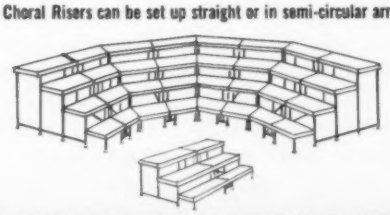
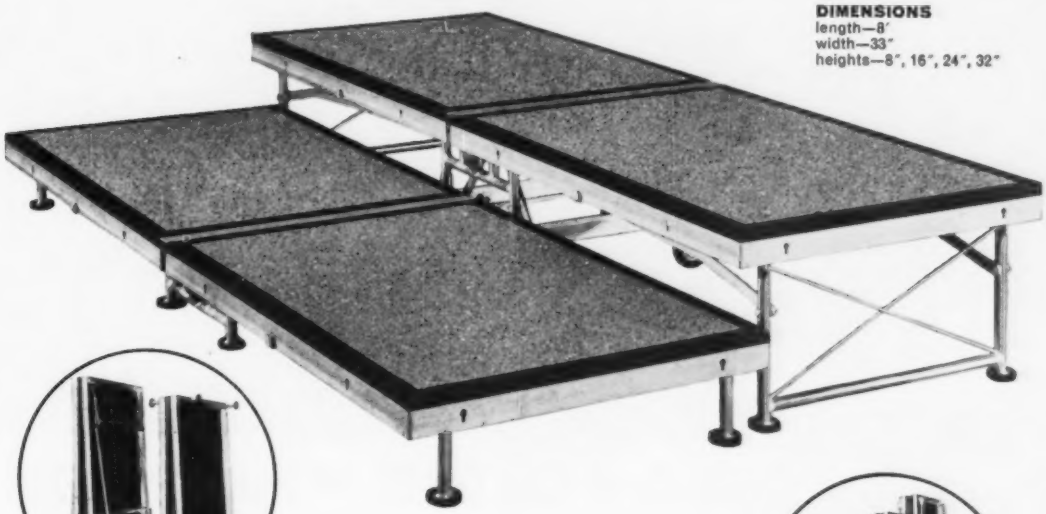
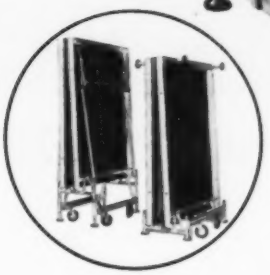
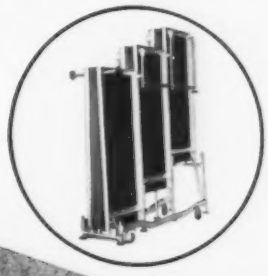


DIMENSIONS
length—8′
width—33″
heights—8″, 16″, 24″, 32″







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OV-222

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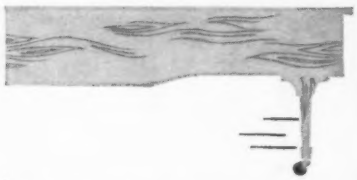

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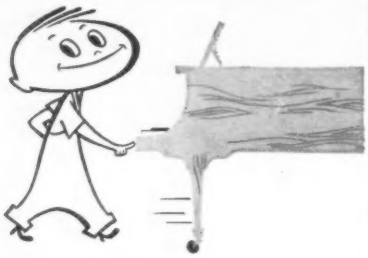

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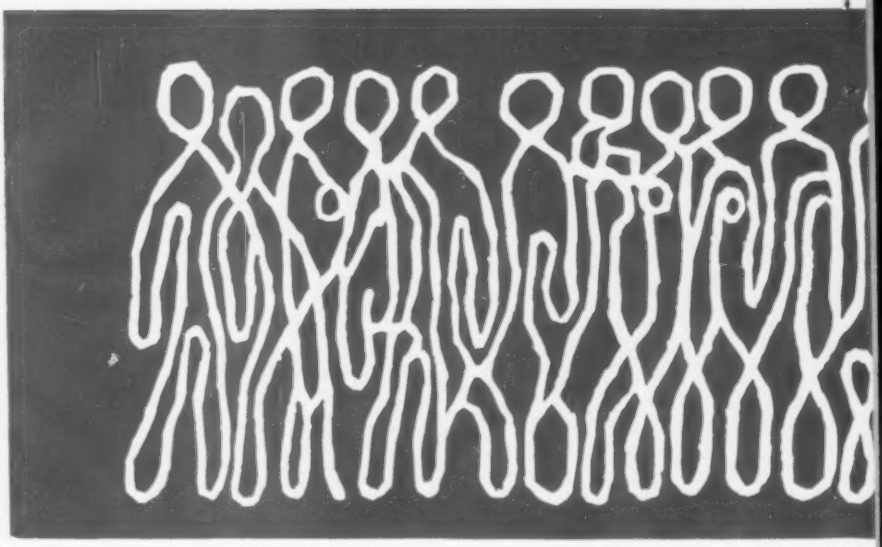


SEARCHING THROUGH

There are many kinds of research, including the research that fails only because its findings don't reach those who could use them. We report here a piece of research on certain tests of the effect on later college performance of ability-grouping in high school, a discussion of the growing chasm between research in learning and teaching methods, and a study of class size in college.

Effect of grouping on later performance

GROUPING STUDENTS on the basis of ability has long been a controversial issue in American education. In recent years, with increasing concern being expressed for the identification and special education of academically talented students, the trend seems to be toward more grouping.

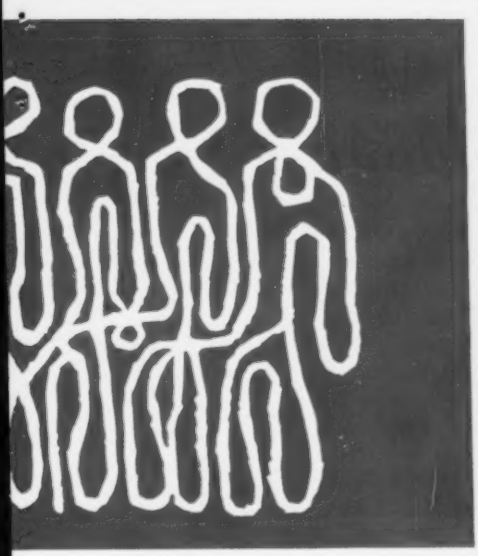
Ability grouping has received the attention of researchers, each trying to prove the advantages or disadvantages of different methods and purposes of organizational plans to account for individual differences. One of the latest pieces of research on the issue was presented to the New York State Association of Deans and Guidance Personnel in November.

David A. Abramson, who reported the study, compared the various achievement levels of college sophomores who had experienced heterogeneous or ability grouping in high school.

Academic achievement was selected as the criterion for two reasons: although not the sole objective of programs for able high school students, it is an accepted one, and it is more accessible to investigation than intellectual interest, social and personal adjustment and motivation. Grade point averages, course grades and honors were used to measure achievement.

The sample, 192 students with IQ's ranging from 115–160, was drawn from four New York City high schools. One school had no grouping on the basis of ability, another was a special school to which only gifted students were admitted. The other two had different degrees of ability grouping.

What did the study reveal? "There were no significant differences in overall achievement through the sophomore year of college between students who had been members of ability groups in high school and students who had not been grouped on the basis of ability." The only variable to produce a sig-



RESEARCH

nificant effect for each of the three achievement criteria was the level of intelligence.

Mr. Abramson concludes that "if there is an increased demand for better training of the able pupil in high school in order to assure greater success in college, it is difficult to see how practices of ability grouping in the high school, for pupils with intelligence quotients ranging between 115 and 160, can make a contribution to such success as measured by usual academic standards." The report suggests that further research on the education of the high-ability student be centered on the curriculum and methods of teaching.

Learning theory and its application

CAN THE LAWS of learning be applied in the classroom? Three experimental psychologists say "Yes, *but . . .*"

The question was explored by K. W. Spence of the State University of Iowa, A. W. Melton of the University of Michigan, and B. J. Underwood of Northwestern University. Their discussions were presented at a symposium held in May 1958 under the auspices of Northwestern's

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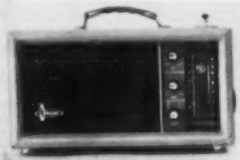

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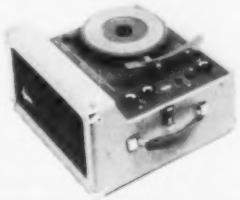

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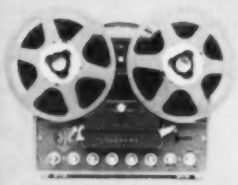

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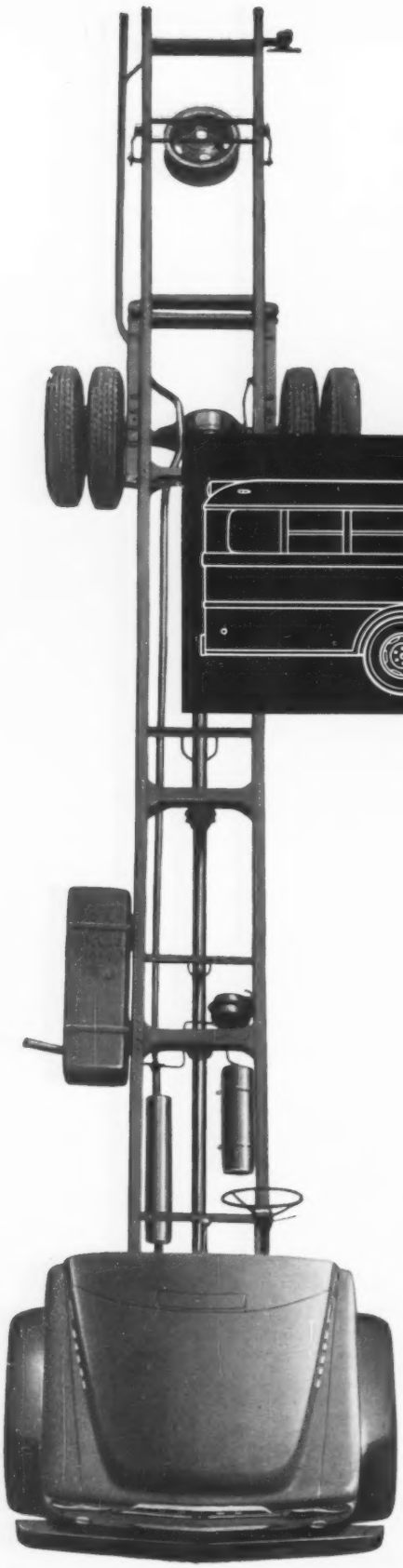

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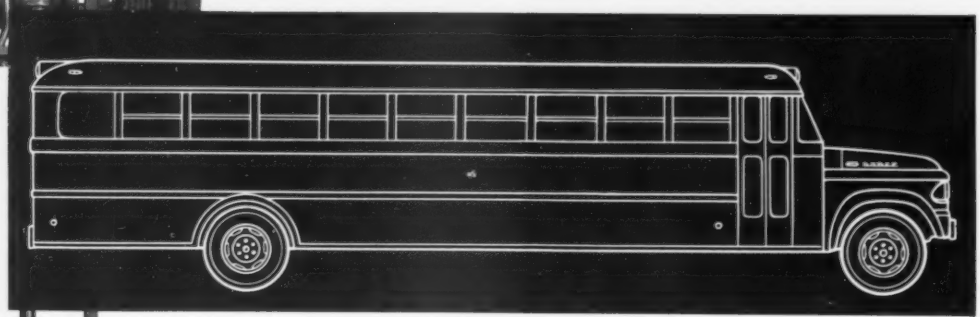

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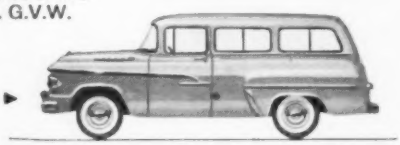

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School of Education—Department of Psychology, Carnegie Project—and are reported in the Spring 1959 issue of *Harvard Educational Review.*

Spence claims that "the contemporary learning theories of the experimental psychologists have had very little, if any, importance as far as educational practices and objectives are concerned." To explain his point, he draws a distinction between pure and applied research.

Pure, or basic, research has as its goal the discovery of general laws and the formulation of systematic theories. Applied research has as a limitation the fact that it can formulate only rough laws for the particular behavior being investigated. The problem is that psychologists have been asked to solve practical problems before having general laws available to explain behavior.

Although at one time, usually placed in the decade of the 1930's, the relationship between learning theory and classroom application was relatively close, the experimental psychologist today is removing himself from the highly complex classroom setting in order to study simpler aspects of learning and behavior.

The translation of such terms as stimulus-response, conditioning, discrimination learning, drive levels and reinforcement into concrete educational practice is an extremely difficult task, particularly in view of the disagreement among psychologists over the interpretation of basic laws. But in spite of the difficulty, translation is possible. The teaching machine, advocated by another psychologist, B. F. Skinner, is an example cited of practical application of the principles of reinforcement.

Spence makes this concluding statement: "That the time is ripe for a combined research effort on the part of psychologists and educational psychologists seems abundantly evident."

Melton demonstrates the gap between the science of learning, as part of the science of psychology, and the technology of educational method by analyzing the contents of the *Journal of Experimental Psychology* and the *Journal of Educational Psychology.* The former devotes about two-thirds of its 800–1,000 pages each year to learning, and "there is almost never a reference to the implications of the findings for education." Less than 25 percent of the articles in the *Journal of Educational Psychology* have to do with the conditions and management of learning in school situations.

What are some of the difficulties that must be overcome if an integration of science and technology is to be achieved? Melton discusses several: (1) the failure of experimental psychologists to be interested in educational applications; (2) the lack of a unified science of learning; (3) the difficulty of making general conclusions because of the limited nature of present experimentation; (4) the failure of the behavioral sciences to develop a satisfactory classification scheme by which specific tasks of

OV-225

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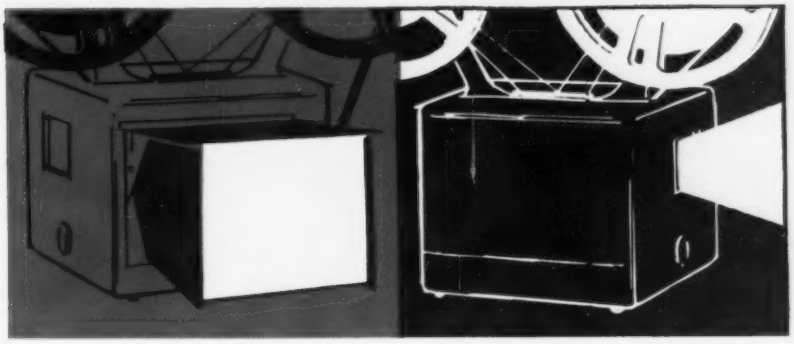

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10 AM: Science Film used in 6th Grade Classroom. Normal light permits students to take notes and refer to study questions on blackboard.

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12: Superintendent uses film to explain School Reading Program at a Service Club luncheon.

1 PM: Social Studies Film (reviewed by Teacher at 8 AM) used in 5th Grade Classroom as part of the introduction to the study of Mexico. Auditorium.

2 PM: Animal Life Film used for science study and language experience in 2nd Grade Classroom.

3 PM: Film on Fractions used again—this time for a small group of students requiring extra help.

4 PM: Science Club uses film on Astronomy to expand interest of gifted children. Classroom

5 PM: Study of Team-in-Action Film taken at last basketball game. Corner of Gymnasium.

6 PM: At dinner meeting, Audio Visual Coordinators' preview films for possible purchase.

7 PM: Teacher reruns History Film to prepare quiz for class review screening next day.

8 PM: Architects show films on new schools to Building Committee, plus interested community members. Auditorium.

9 PM Adult Education class in dog handling views Field Trial Film. Gymnasium.

Duolite's TV-type Projection was used eight times.

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Research (continued)

human beings "can be described, identified, and placed in a dimensional matrix in relation to other tasks"; (5) the confusion over basic and applied science, and research and operational evaluation; and (6) gaining access to children of school age for experimental investigation.

Melton believes these difficulties can be overcome. One step is to develop a "formal statement of the details of the relationship between the science of learning and the technology of educational method in order to provide a "grand strategy" for the acceleration of both. A second step would be a series of research and development planning efforts to identify relevant problems. "A third requirement is for facilities and subjects for research and development studies. Finally, there must be a reexamination of the training of psychologists and educational psychologists with these opportunities in mind."

Underwood agrees with Spence that current experimentation deals with small factors. However, he said, "a 'small' phenomenon may be very important in leading to a scientific understanding of learning and yet be of little practical importance."

Classes: how large is small enough?

FACED WITH RAPID enrollment increases in elementary economics courses at Kansas State University, the economics department, under the direction of Wallace B. Nelson, conducted an experiment using different class sizes as the only variable. The results are reported in the October 1959 issue of *The Educational Record* under the title "An Experiment with Class Size in the Teaching of Elementary Economics."

The author acknowledges the preponderance of opinion favoring smaller classes. However, he was able to find in the literature "virtually no evidence to support this viewpoint" particularly regarding classes in economics. The study was designed to answer the question, "Can elementary economics be taught as effectively in large classes as in small ones?"

The design of the experiment consisted of stating the objectives to be measured, conducting small and large classes simultaneously, holding all relevant variables constant except for class size, testing for achievement and comparing the results.

Nelson came to the following conclusion: "For the four instructors involved, teaching the course they taught and using the teaching techniques and testing methods they employed, large classes from 85 to 140 can be taught as effectively as small classes of 16 to 20."

The conclusion is a cautious one. The author does say later that "if conditions elsewhere are similar to those at Kansas State, as I think, the conclusions are widely applicable." He is equally careful in explaining the limitations of the study. The results were measured and compared using objective examinations, omitting entirely the effects of the student's value system, critical thinking, communication, and tolerance for contradictory convictions. These intangibles, according to the author, are not clearly enough defined to permit measurement.

Nelson concludes that, "a policy of teaching most of the elementary economics course in sections of up to 150 seems defensible. In addition, a number of small sections, reserved for exceptional students with the brains and ability, the drive and the communication skills required to exploit the discussion potential of such sections, may be in order."

Why did Nelson, after being highly objective throughout the experiment and the report, include this last comment? If achievement is comparable in large and small sections, why suggest using small sections unless they have some additional value? The author's cautious conclusion seems hardly to beg the question the experiment set out to answer. Still, the favorable results with large classes that he reports earlier should be welcome support for college administrators who now face an enrollment explosion.

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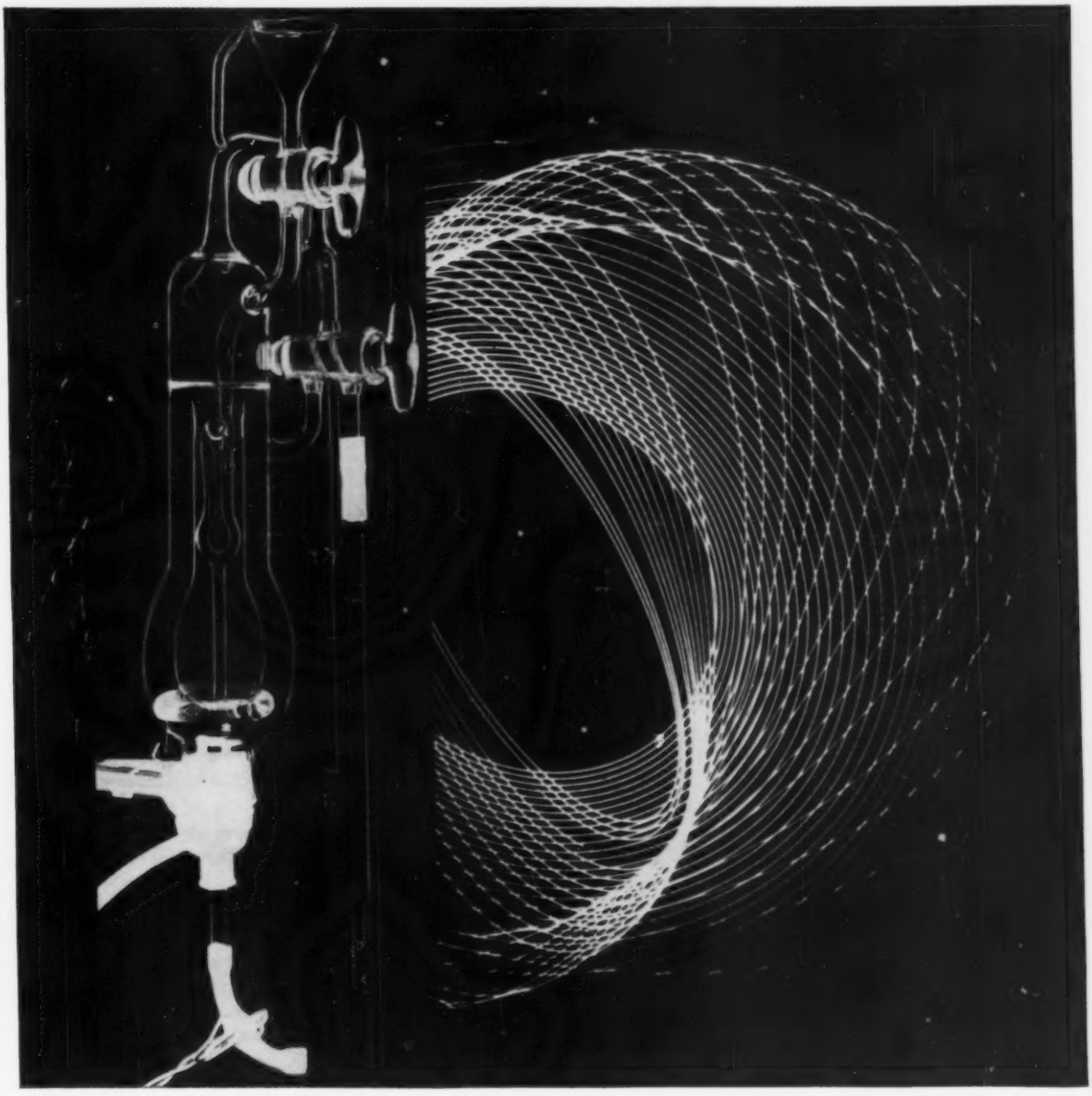

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OVERVIEW

For All Educational Executives

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PUBLISHER'S MEMO

Since publishers are often described as would-be editors who can't write, I approach the idea of a monthly column for *Overview* with considerable modesty. If the column quietly disappears after two or three issues, you will know I was either overcome by said modesty or systematically eliminated by the blue pencil of some editor unable to recognize deathless prose on first reading!

Meantime, I would like to try to offset the big broad picture of *Overview* with a much narrower and personalized focus upon our own publishing enterprise and the behind-the-scenes decisions and experiences which shape our destiny—sometimes in spite of ourselves! For months now our staff, editor and publisher included, has been traveling to all sections of the country to tell key reader and advertiser groups about our decision to merge The School Executive and Educational Business into *Overview*, the magazine for all educational executives. From now on there can be no further reliance upon the reputation of The School Executive, which we published for 21 years. *Overview* is now launched and on its own.

Our collective hats are off to the thousands of readers who liked our *Overview* concept enough to send in paid subscriptions before an issue was in their hands. And we are grateful to every manufacturer and supplier serving education whose confidence in our staff and in our background of educational publishing led him to become a charter advertiser. If the combination of editorial worth and the curiosity factor achieves wide "pass-along readership" for this copy, advertising salesmen will be greatly pleased.

The February issue, too, should be something quite special—our "exhibit" for the AASA gathering in Atlantic City. We hope to meet personally with many of you there.

Donald V. Buttenheim

A COURAGEOUS STEP FORWARD

. . . toward accelerating school science teaching to fulfill the objectives of the National Defense Education Act has been accomplished. The new Purchase Guide just distributed by the Council of Chief State School Officers gives every school the requirements for basic, standard and advanced equipment for science teaching.

"This is quite an exciting thing to me," said United States Commissioner of Education, Lawrence G. Derthick. "It should help stretch the educational dollar further and improve the standards of instruction.

"When teachers in these areas covered (Science, Mathematics and Foreign Languages) are given money to buy new equipment, they will have master lists available to show them what equipment they should have, and how much use they can expect to get from it."

"Some State School Superintendents are known to be considering making the Guide the official standard for all systems under their jurisdiction so that schools will use the National Defense Education Act money wisely," says Andrew Bingham, Staff Writer of the Sunday Star, Washington, D. C.

Congratulations are in order. Bausch & Lomb joins the thousands of educators who are saying to the host of workers responsible for this monumental 344-page book, "Thank you for a tremendous job well done."

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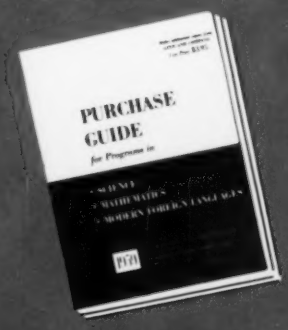

"Widespread use of this book will discourage routine purchase and use of obsolete materials and apparatus, while encouraging the manufacture, purchase and use of more modern teaching aids. The Purchase Guide should reduce sales of shoddy, uneconomical, or inappropriate items and assist reputable manufacturers in making products of high quality and usefulness that can be sold at reasonable prices. It should arm school authorities against high-pressure sales tactics and enable them to become better informed about what to purchase and how to get full value for school funds expended. Most important of all, the Purchase Guide should advance the content and quality of instruction in the sciences, mathematics and modern foreign languages."

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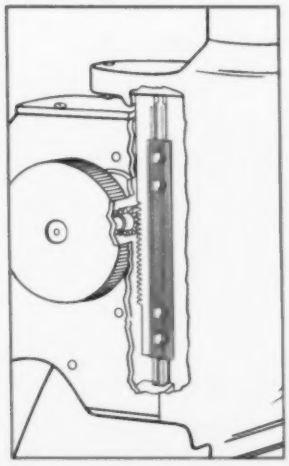

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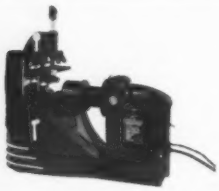

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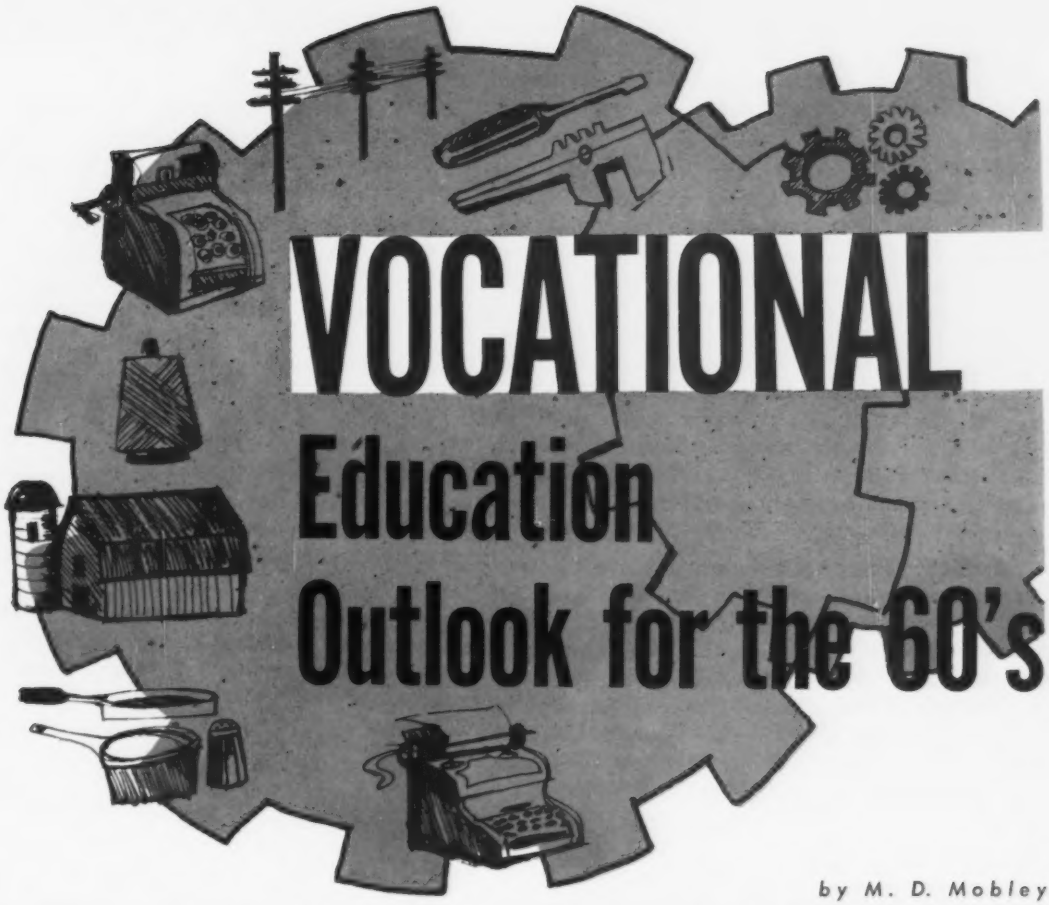

VOCATIONAL Education Outlook for the 60's

by M. D. Mobley

FORECASTING THE GROWTH of vocational education during the next decade could prove to be as inaccurate as the predictions of many demographers during the thirties who said that the population of the United States would reach 165 million in the year 2000. Today, at the beginning of 1960, the nation's population is more than 180 million and may exceed 200 million by 1970.

This population "explosion"—a boon to American business—calls for more of everything, including jobs. New technology and new methods of production and distribution are creating new occupations and changing old ones. Scores of products not yet being produced will be on the market before the end of the sixties. These dramatic changes in American life will call for a new kind of vocational and technical education.

James P. Mitchell, Secretary of Labor, says: "The general demand for skilled workers will continue to be a fundamental manpower fact in the future. . . . The pinch gets tighter as the economy grows and as our national appetite for goods and services grows in billion dollar gulps."

In the sixties we will have more people needing more goods and services. Technological progress will foster demands for more highly skilled personnel and fewer unskilled and semi-skilled workers. Population growth and technological changes will force us to expand, revise and improve virtually all phases of vocational education. The program must be patterned on changing conditions if needs are to be served and our high standard of living is to be maintained.

If public schools fail to meet the challenge, private groups within industry, labor organizations or other agencies of the government will perform the service. Labor and industry should and will continue to be involved with trade and industrial training. But it would be a mistake for the public to relinquish its interest in and control of this important phase of vocational education.

If the public schools fail to meet their responsibilities for effective vocational programs, the resulting inefficiency of American workers could seriously effect the amount of our imports and exports, thus endangering our economic growth. Marketing American goods in foreign countries is becoming increasingly difficult because, in too many instances, we cannot compete successfully on a price basis with goods offered by other nations. This has forced some American industries to move their operations entirely to foreign soil, or to establish branch manufacturing plants outside the United States. If this trend is not halted, our national employ-

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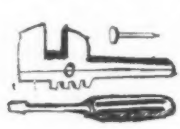
Dr. Mobley is executive secretary of the American Vocational Association.

ment picture could be drastically altered. On numerous occasions Russia's Khrushchev has announced Soviet plans to lick us in an economic war. In his speech to the Economic Club of New York City last September he said:

"All of you are well aware of the fact that we are offering you economic competition. Some describe this as our challenge to the United States of America. But, speaking about challenges, one might say . . . that it was the United States that first challenged all the world; it is the United States that developed its economy above that of all countries. For a long time no one dared to challenge your supremacy. But now the time has come when there is such a state which accepts your challenge, which takes into account the level of development of the United States of America and in turn is challenging you. Do not doubt that the Soviet Union will stand on its own in the economic competition, will overtake and outstrip you."

Machine tools, the basic instruments of industrial production, are being produced in Russian plants "with less than half the man-hours required in comparable Western operations," according to a front-page story in *The New York Times.* This story was based on a report by Seymour Melmon, associate professor of industrial management and engineering at Columbia University and a consultant of production techniques, who spent part of last August and September in Russia studying



production methods. Professor Melmon said, "If present trends continue the Soviet Union will in a few years have a world lead in efficiency in the production of machine tools, the basic equipment of modern industrial economies."

As a part of Soviet economic plans, Russia is now reorganizing its entire system of education, and it is scheduled to be completed by 1963. The new reorganization law calls for a greatly expanded program of vocational education—patterned somewhat after the programs we have been developing in vocational and practical arts education during the past 40 years. Soviet leaders are acting on the theory that success in winning an economic war depends in large measure upon the skill and productivity of their people—and this comes through vocational training.

Regardless of the hysteria created by the Russian Sputniks, it seems safe to predict that there will be a great expansion of vocational education during the sixties. The public will demand it. This is indicated by a recent Purdue University study which shows that 83 percent of a carefully selected sample of leaders in many phases of American life believe that vocational education is extremely important to the security and economy of our nation.

It is not possible to predict accurately the details of developments or even the extent to which vocational programs will be publicly financed and controlled. However, social, economic and technological changes, coupled with population growth and foreign economic competition, would seem to indicate the following developments in vocational education.

Programs for Adults. There will be a tremendous upswing in vocational programs for out-of-school youth and adults. Technological developments in industry, agriculture, business and distribution, and new homemaking problems will demand stepped-up vocational programs for adults. This trend is underscored by the fact that in our nation's capitol today virtually every major organized group has a staff of specialists charged with the responsibility of developing vocational programs for journeymen, apprentices, farmers and other workers. These training specialists are employed by both management and organized labor groups. Through membership action at state and local levels they will continue to demand more training programs to keep their workers up-to-date in science and technology and to advance skills. If public schools fail to provide the training needed and requested, these organized private groups will finance programs from their own resources.

Area Programs. Area vocational schools and programs will move forward quickly during the sixties. This will not be a new development, since many states launched such programs years ago—one as early as 1915. Then, too, large cities have for some time operated specialized vocational-technical schools that serve all or a large part of the metropolitan area. But many more area schools and programs are essential if all Americans who need and can profit from such instruction are to have opportunities for vocational training. Many of these programs will be developed to serve rural youth and adults—primarily farm youth beyond high school age—who in past years have had access to vocational training only in agriculture, home economics and in some cases business education.

As mechanized farming continues to force more youngsters off the farms and into urban areas to seek employment, farm youth will of necessity need more vocational preparation. The March 1958 issue of the ***Farm Journal,*** which has a circulation of approximately 3 million, carried a splendid feature on area schools entitled "The Kind of School We Need Everywhere," which concluded with this plea: *"Farm Journal* goes on record as strongly in favor of state aid to provide more funds for area vocational schools. We need such schools to keep America strong, and we need them for the sake of farm boys and girls. Why not do something about it in your community and your state?"

Comprehensive High Schools. The sixties will bring new growth for comprehensive high schools with strong vocational and practical arts programs, especially in semi-rural areas and in cities with a population of 100,000 or less. James B. Conant's report, "The American High School Today," will contribute much to this development. Currently many institutions that are called comprehensive high schools are failing miserably to serve the educational needs of all the pupils enrolled. They are offering little or no vocational education. To be truly comprehensive, high schools must meet the secondary educational needs of *all* youth.

Home Economics Education. During the sixties home economics education will continue to occupy an important place in the offerings of secondary schools. New problems face America's families as more women enter employment outside the home. Half the new workers will be women and more than a third of all wives will work outside the home. This calls for an intelligent sharing of home responsibilities by the husband and other members of the family. Larger middle- and upper-class families will call for renewed concentration on the study of child development, nutrition and human relationships. In home economics, as in other phases of vocational education, there will be a continued increase in the number of adult enrollments.

Agricultural Education. Vo-ag programs will continue to be an important offering for high school boys in rural schools; but future years will bring more emphasis on the selection of students.

Today agriculture is the only vocational program available for boys in many rural schools. As more area programs in other phases of vocational education are developed, pupils will find more choice in occupational training, which in turn will result in a better selection of pupils for instruction in vocational agriculture.

The most important development in this phase of vocational education in the sixties will be the expansion of programs for young farmers. Enrollees will be young men who have completed high school and are already engaged in farming. In many states these courses will be taught by agricultural specialists serving as itinerant teachers. Some of these courses will be conducted on a short intensive basis at area vocational schools. Much of the course content will deal with farm management problems involving finance, marketing, use and upkeep of farm machinery, use of electricity on the farm and the application of recent agricultural research findings. To keep abreast of these rapidly changing developments, both young and adult farmers will continue to demand educational services.

Distributive Education. Today, a high percent of American workers are employed in the field of distribution and this percentage will undoubtedly continue to climb during the coming decade. While instruction in distribution has been neglected in the past, we should soon see exciting new activity in this phase of vocational education. Enrollments will be made up almost entirely of employed people. Because improving efficiency in distribution could be instrumental in reducing the cost of living, public education must of necessity give more attention to this phase of education.

Business Education. The amount of paper work involved in American business is on the increase which will mean more opportunities for employment in all kinds of business occupations. In the future, emphasis will be on selecting business students who have the ability to learn English, exercise good judgment, and acquire the necessary skills. The large turnover and the expanding need will result in a continuing demand for competent workers in this field. Electronic business machines will also influence the offerings in business education courses in the years ahead.

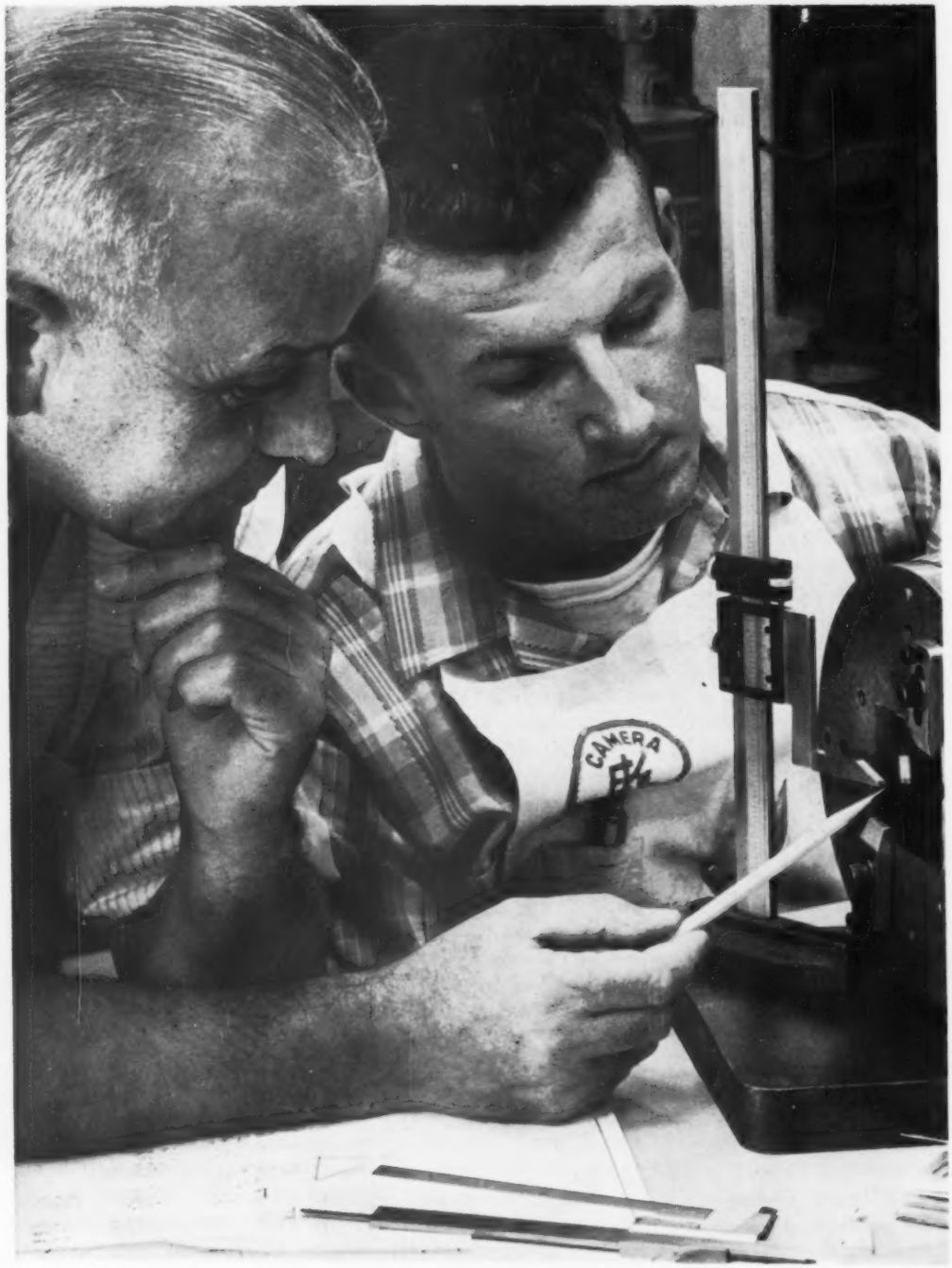
Trade and Industrial Education. In trade and industrial vocational programs one major improvement in the sixties will be reflected in the selection of students for specific courses. Vocational schools that are used as a dumping ground for maladjusted or low IQ youth will serve little, if any, useful purpose in upgrading our nation's work force. In recent years school officials of 15 American cities with the largest population have joined together to find better ways to select students for specific vocational training programs. Organized labor and management groups are taking more interest in this problem as the need for intelligent, well trained, competent workers becomes more acute.

During the next ten years scientific and technical information will have a greater influence on vocational instruction in trade and industrial education than it has in the past years. This is an essential development for both in-school and out-of-school groups. Much of the

instruction for apprentices and journeymen will be in technical aspects of the occupations. Programs of instruction for employed workers—apprentices, journeymen and others—must of necessity be multiplied during the sixties.

America's productive peak is no accident. It has occurred because its people have developed great education programs for both youth and adults to give them the ability to produce more, and thus have more. These programs comprise both general and specialized education. They include instruction in citizenship, in the humanities, in technical, scientific and practical education. No nation can remain strong or maintain a high standard of living unless there are adequate provisions for passing on to new generations the skills and knowledge of productive workers of today, and in the march of progress help them acquire new knowledge and develop new skills.

EDUCATION



Kodak foreman teaches an apprentice to be an instrument maker.

at Work

Some of the nation's most intensive educational activity today is conducted in the "hidden classrooms" of its business and industry.

INDUSTRY-SPONSORED EDUCATION is today the fastest-growing segment of the entire American educational enterprise.

Last year, the General Electric Company alone spent an estimated $40 million educating its employees. This amount was more than the city of Boston spent to operate its entire public school system; it exceeded the gross budget of most major universities.

And G. E. is not the largest company in America—nor is its educational outlay the highest among the great companies. Hidden from public view are literally thousands of classrooms in factories and office buildings across the nation.

Millions of employees, on all levels from clerk to president, are enrolled in this vast educational venture. At company expense and in some cases on company time, they are engaged in an astounding variety of training operations, courses and seminars either in company-owned plant, office and laboratory locations or on off-plant premises such as schools, colleges and hotels. While not all company programs are comprehensive in scope, the education and training activities regularly provided by some large firms are as broad and varied as those conducted by any formal institution of learning.

Below the executive and managerial level, the majority of these programs are aimed at skill-training and development. Some of these are apprentice-training programs, but even skilled craftsmen today are constantly being retrained to meet changing needs. G. E. alone conducts more than a thousand courses in factory skills, and this phase of G. E.'s program is only a fraction of its overall educational effort.

Enrollees in these training programs spend part of their work week acquiring or improving manual skills under the direction of, in most cases, their immediate superiors. "Training is most effective," says James S. Bruce, director of training for the Eastman Kodak Company, "when it's done closest to the job."

Another part of their work week may be spent in a classroom doing related work under the direction of a line specialist or a staff member of the company's training department. Wendell F. Wood, general supervisor of personnel development and training for International Harvester, feels that "training is a line responsibility. Planning, policy making and advisory aid for training programs are staff functions."

Procedures in these training programs tend to be action-oriented and related to the work a person is already doing or committed to do. Teaching methods are also action-centered. "We want more than exposure," says Karl H. Kreder, second vice president of the Metropolitan Life Insurance Company. The goal is to get things done better. Role playing and the use of live skits are, therefore, not at all uncommon, and filmstrips, movies, flannel boards and flip charts are used extensively.

Another type of industry-sponsored education—a type which might be labeled "self-improvement" programs—is growing in popularity. These programs are not so directly tied to material production; their impact goes beyond the immediate specialization. Purpose is to help workers become better employees of the company while preparing them for enlarged responsibilities. Courses rely, to some extent, on the intellect, but the results sought are in behavioral terms. Employees learn to communicate better, to deal with people, to lead and to teach others.

The "self-improvement" courses offered by industry have an encyclopedic range. G. E. offers a choice of 500 courses to its professional, technical and semi-technical employees. The International Business Machines Corporation had over 18,000 such course completions by employees in 1958.

Included under the heading of "self-improvement" programs are courses in psychology, economics and languages. One of New York City's major banks plans to provide for systematic studies in citizenship. IBM offers subject categories ranging from engineering, science and technology to business, administration and personal development. They also provide a vast customer education program to customer executives, engineers and others using IBM equipment. Hundreds of clerks and many officials at the Chase Manhattan Bank in New York City take courses in human relations.

Many of these programs are scheduled on plant premises, especially when there are no colleges nearby. IBM provides extensive voluntary education programs at most of its plant, laboratory and headquarters locations.

At its Kingston, N. Y. site, the IBM program enrolled

By Matthew J. Pillard, managing editor of OVERVIEW

Young executives enroll in IBM's voluntary course in basic mathematics.

1,300 employees last year out of a total work force of 5,500. The instructional staff there consists of company-employed specialists willing to serve dual roles. Additional career teachers from schools and universities some distance away commute to Kingston to meet classes. While the program is voluntary, 80 percent of the enrollees completed courses last year—and these courses are not conducted on company time. Most of them are scheduled at night, and five of them last year were part of a "Rooster Club," with classes meeting twice a week from seven to eight A. M.—*before work.*

The vast majority of the self-improvement courses, however, are given off premises—usually in classrooms and local schools and colleges. The prevailing practice is to take advantage of college offerings, staff and facilities if they are readily available.

Technicians, supervisors, office and factory workers are not the only employees in company-sponsored education programs.

On the executive and managerial level, programs are emerging at a dazzling rate, and in a dazzling variety of forms.* Not only middle management personnel but a substantial number of executives at or near the policy-making level are enrolled in these programs, whose purpose, according to one major company, is to make the firm "the best managed company."

These managerial programs fall roughly into three categories: those planned and conducted by the company staff on its own premises; resident programs conducted on college and university campuses; and courses, seminars and conferences conducted by professional associations and societies such as the American Management Association and the Society for the Advancement of Management. The greatest enrollments among the country's back-to-school executives are in the last category.

Altogether, AMA president Lawrence A. Appley estimates, over half a million managers on all levels annually participate in this national 3-ring arena of executive growth.

G. E. has its own scenic campus near Ossining, N. Y., with classrooms, seminar areas, an auditorium, dormitories and other facilities for study-in-residence. The unit is called a "management research and development institute." Other companies have corresponding facilities—sometimes separated from and sometimes connected to their business locations.

The college and university programs are usually conducted during the summer in two to 13-week sessions. Students are men of demonstrated ability on leave from their companies. Programs are designed and conducted largely by resident faculty members, frequently assisted by business executives. There are about 50 universities regularly serving this field today and new ones enter the picture each year.

An interesting variation is the Advanced Management Conference of the Metropolitan Life Insurance Company. This program, tailor-made for the upper management level of the company's personnel, was initiated last summer. A pair of 3-week sessions, each one serving a

* Melvin Ashen reports varying attitudes toward company experiences in executive development and suggests conditions for realizing their potential, in "The Care and Raising of Managers," in *Think*, November 1959.

group of 45 high executives, was conducted at the Nassau Inn in Princeton, N. J. Faculty of the Princeton program includes university professors and top Metropolitan officers. Subject matter focusses on planning, decision making, administration and control. The academic staff lectures and leads discussions dealing with basic principles, while company officers direct attention to applications in business. Metropolitan's Kreder, who spearheads the firm's executive study program, expects it to continue until all upper management personnel have participated.

An interesting side-effect of this industry-sponsored educational effort has been the emergence of a new breed of executive—a sort of in-company educational executive. These men have their own professional organization, called the American Society of Training Directors. Founded in 1945, the organization now has nearly 4,000 members. Chapters serve 50 states, the District of Columbia and Canada. Since many firms are international, membership even includes 25 foreign countries.

Like any professional society, the ASTD holds conferences, conducts studies and produces its own monthly journal. It is guided by a point of view expressed officially as follows:

> The future should bring increased emphasis on the education of people in and by business itself. Fast moving technological developments, the promise and reality of automation, the need for increased productivity and the inability of public education to serve the needs created by the rapid growth in population, all indicate that people must be educated within industry in unprecedented numbers.

The profession of educational administration in America, therefore, is gaining colleagues from among those responsible for the conduct of education affairs by business and industry. The latter seek assistance from their counterparts in established institutions of learning, and reciprocal contributions are becoming increasingly conspicuous. The effort by business and industry to develop its executives has so impressed professors of educational administration that last August they devoted their week-long national conference to the theme.

Why are private firms so vigorously expanding their education programs? The answer is simple; there is no suitable alternative. Change is inevitable. Industry considers it necessary, not only to keep apace of these changes, but to influence them. The only sound methods are through education and research.

Underlying the entire movement is a firm faith in the education process. Increasingly, industry is recognizing that education does not end with a college diploma. America no longer seems divided over the importance and value of education for all of its people on a continuing basis. Today's big question is how to marshall our vast resources for the purpose.

Education at work ranges from on-the-job skill development to top-management seminars.

Top management executives talk out problems at an AMA workshop seminar.

NEW FORCES in SCHOOL ADMINISTRATION

by Daniel E. Griffiths

The job of today's educational executive is not what it was a decade ago. Three major forces are giving it new shape.

SCHOOL ADMINISTRATION is in a period of redirection. Many changes have occurred recently, with remarkable rapidity and with almost a single stimulus.

During the last years of World War II, members of the great national organizations of educational administration—the American Association of School Administrators, the National Council of Chief State School Officers, and the Division of Rural Service—became increasingly concerned about the state of American educational leadership. Their discussions soon led them to the Kellogg Foundation, which had expressed an interest in their field. This action and the exploratory conferences held after the war in various sections of the country prompted the Kellogg Foundation to support a nationwide project for improving educational administration. Many universities submitted proposals to Kellogg, and of these, eight were included in what roughly constituted a national five-year plan: Harvard; Teachers College, Columbia; George Peabody; Texas; Ohio State; Chicago; Stanford; and Oregon. Approximately $4.5

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million was granted to the eight universities; subsequent grants raised this amount to over $6 million. Here, for the first time since the profession of educational administration was established, substantial amounts of money were available for improving programs, for recruiting promising talent, for publications, for conferences, for research, and for providing time in which to think. The project was named the Cooperative Program in Educational Administration.

After nine years of activity what are the results? Many changes are in evidence. Some are variations or modifications of earlier practices or ideas, some are radical breaks with the past, others are mutations. The new directions now apparent in school administration (as well as in all other types of administration) stem from: (1) the emergence of new problems; (2) the development of new theories; and (3) the creation of new methods of instruction.

New problems grow out of old ones, as we shall illustrate.

Administration is concerned with controlling the way in which people behave within an organization, and the exercise of control is managed only through the use of *power*. There are three major types of power, or ways of getting people to act which administrators use: *force* (influence brought to bear through the use of physical force); *domination* (influence brought to bear through the use of direct request or demand); and *manipulation* (influence brought to bear without making explicit the behavior the power-holder wants the subordinate to perform).

Domination has always been the only kind of power acceptable to a democratic society. Due to the extended preparation of teachers, increased power of teacher organizations and the teacher shortage, administrators are less and less able to control by domination. Indirect methods of control appear to be replacing direct methods.

Morris Janowitz, in a study of power in the Armed Forces, reported that:

> Military authority must shift from reliance on practices based on *domination* to a widening utilization of *manipulation*. By domination we mean influencing an individual's behavior by giving explicit instruction as to desired behavior without reference to goals sought. Domination involves threats and negative sanctions rather than positive incentives. It tends to produce mechanical compliance. By manipulation we mean influencing an individual's behavior by indirect techniques of group persuasion and by an emphasis on group goals. Manipulation involves positive incentives rather than physical threats; though it does retain the threat of exclusion from the group as a form of control. The indirect techniques of manipulation tend to take into account the individual soldier's predispositions.

The movement away from domination toward manipulation was predicted by George Orwell in his clairvoyant book, *1984*. To one who studies modern organizations, 1984 is none too soon for Orwell's forewarning to materialize. So one of the contemporary problems which has evolved from the old is that of control. It was once ethically justifiable in a democratic society to exercise domination. Is it now ethically justifiable in a democratic society to exercise manipulation?

The upset in staff relationships that follow the addition of specialists, now becoming common in large school districts, is another new problem. One of the most significant innovations today is the addition of what are called staff service administrators. The Cooperative Development of Public School Administration Study in New York State found that in a seven-year period the number of business administrators increased 200 percent, and that in a five-year period the number of instructional staff administrators increased 100 percent. With this increase came problems of relationships, authority and organizational procedure. The conventional line and staff concept which has been employed for a long time is now to be questioned.

James D. Thompson, in *Modern Approaches to Theory in Administration*, raises the question in a succinct manner:

> One frequent distinction between "line" and "staff" in complex organization is that the "line" gives orders while the "staff" gives advice. Now we all know the difference between orders and advice. Or do we? When a staff assistant to my boss indicates that I am doing something inefficiently, have I received advice or an order? In many cases, I am convinced, advice has been given (or intended), but orders have been received (or perceived). The line-staff distinction is common sense to a great many administrators, but, in my opinion, it has seriously interfered with the development of administrative theory.

Traditional administrative theory has failed to meet the challenge of contemporary problems. Modern administrative theory recognizes that the core of administration is people, and how they live in organizations. Today, theory attempts to interpret the findings of behavioral scientists in terms that concern the administrator.

Examining modern theories of administration would quickly convince the reader that they are much different from the theory of a few years ago. The theoretical efforts of Getzels, Argyris, Simon, Barnard, Litchfield and Griffiths primarily focus on how people behave in an organization and how the administrator can cope with this behavior.

Many school administrators are skeptical of theory, and equate it with philosophizing, some sort of common sense, or a personal pattern of behavior. In order to define what theory is, let us see what it is *not*.

Not a philosophy—The most common belief regarding theory of administration is that it is a set of "oughts,"

a set of rules on how to administer. It is true that a set of values is vitally important to the administrator, but these values are not a theory. The difference between theory and values is usually discussed in terms of the "is-ought" dichotomy. For example, if a person jumped from the 30th story of a building, we could figure out the exact speed at which his body would hit the sidewalk below, calculate the force of the impact and predict that the person would be killed. All this is in the realm of theory, or "is"; there is no implication of values, or "ought to," in this statement. However, values can be put as variables. A person might raise the question, "Do I want to die?" If his answer is yes (a value judgment), then he might consider leaping from a 30th-story window, which theory tells him would be very effective. Theory, then, does not tell us what is "good," but merely what will *happen* if we do certain things.

Not common sense—Most administrators take pride in the fact that they have enormous quantities of common sense. They feel that they have learned what they know—which is considerable—from their own experience. What do we learn from experience? Fritz Roethlisberger, writing in *Harvard Business Review,* points out that: "Astonishingly enough, it seems to teach different people different lessons. It often teaches the 'wrong' as well as the 'right' lesson. The 'school of hard knocks' makes criminals as well as businessmen."

And what is wrong with common sense? In his book *Personality and Organization,* Chris Argyris sharpens the difference between common sense and theory in this way:

> . . . common sense proponents are actually using a theoretical framework with which to understand the world. It is their own personal, private, prejudiced framework created to keep themselves in a relatively happy state with their environment. The difference between a common sense theoretical framework and a scientific theoretical framework is that the latter attempts to be public, not private; it is systematic, not random; it does not permit prejudices to enter; and finally, it is continuously tested not by one case but by many.

Not personal—Some hold that theory is a rather personal matter—something each person works out for himself. It is true that each administrator does develop a style or pattern of operation, but this cannot be called a theory. Most likely, it is a set of rules of thumb evolved from the administrator's experience. Because this experience is of necessity limited, the rules of thumb do not have the breadth, depth or logical deducibility necessary to constitute theory. Although each administrator forms an opinion of what will work as he faces the numerous problems of each day, he should not delude himself into thinking that he has developed a theory.

What, then, *is* theory?

A generally accepted definition of theory is that it is *a set of assumptions from which can be derived a larger set of empirical laws.*

By applying such laws better research can be achieved, and the administrator can predict the results of his actions. At the present time, no one theory is developed to the point of being of any great value. Present theories do give an indication, however, of developing useful knowledge in the coming years.

The subject-matter of modern theories is interesting because it is indicative of what future administrators will study. Some of these subjects are:

Motivation—A junior high school principal in his first year once said to me: "The chief cause of worry is the teachers. If I could only understand why they do the things they do, my job would be so much easier." Here is a key administrative problem. What is it that causes people to do the things they do? The administrator can find the answer to this question by understanding motivation. He must realize that motives are not only psychological (individual), but also sociological, anthropological, residual and spiritual. Many motives are induced by the groups within which we work. Very probably, teachers in our junior high school principal's system were wondering why *he* did the things *he* did. Administrators must be capable of understanding their *own* motivation in addition to the motivation of the individuals with whom and through whom they work.

Perception—A new subject of considerable concern to administration is perception, which is concerned with such questions as: How does the administrator perceive his role in the school and the community? How does the teacher perceive her role? How does the administrator perceive the teacher? Are the perceptions in conflict? Perception studies have shed considerable light on the problems of how administrators see the situation in which they are operating, how group pressures change the way in which an individual "sees" a situation, how position in the power structure changes one's view of reality, and how we all build perceptual screens through which we filter the information we receive.

Communication—The administrator's environment is verbal. If we had to characterize the actions of an administrator in a single word, we would say that he "talks." He talks or listens about 90 percent of his time on the job. He is in constant verbal communication with teachers, pupils, board members, townsfolk and salesmen. He must therefore be able to use language that will convey his meaning effectively. Administrators also communicate with others by means of inflection, facial gesture, the way they react to proposals, the way they listen. The study of how one person communicates with another will consume an increasing amount of attention.

Power Structure—All social organizations are held together by some sort of power. Knowledge of what holds the community together—of what makes it go—is vital to the administrator. Likewise, knowledge of what holds the school system together and of what makes it go is vital to the school administrator. Studies of power structure are relatively recent and are now being incorporated into the curriculum of educational administration. Without a doubt, if information about power structure had been taught to many present administrators, they would not be in such difficult situations.

Authority—The outward manifestation of power is authority. The state is, for instance, the source of the authority of the board of education, which in turn grants

authority to the chief school administrator. Although authority is a commonplace topic, it is seldom thoroughly understood. How, for example, does authority affect the behavior of individuals? Studies in this field point out that a person changes his behavior pattern as the amount of authority he possesses changes. The behavior of subordinates differs from that of superiors and often this difference is not a healthy one. Studies of power and authority must become part and parcel of the knowledge of all school administrators.

Group Dynamics—Although the administrator must always work with individuals, much of this work is done when the individuals are in groups. Committee and board of education meetings are just two of the many group experiences common to all educational administrators. Knowledge of what contributes to groupness, the dynamics of group action, and skills in working with groups are invaluable assets for a successful administrator.

Decision-making—All the knowledge on the preceding topics is brought to bear by the administrator in making decisions. Decisions are not made in a vacuum; they are made against a background of experience. It has been said that all decisions are made in a power context. No one knows this better than the educational administrator, but to date information on how to cope with decisions in this context has not been part of his preparation. In order that each decision be one which advances the school system, the administrator needs to be skilled in the process of making decisions, and he must have the broad background of knowledge against which to match alternatives.

Leadership—The literature of leadership still indicates some confusion as to basic theory. However, while not much of a practical nature is known, there is guidance available to the administrator. The administrator is the educational leader of his community and should be aware of all that this implies. Leadership is essentially a group function primarily concerned with making and implementing decisions and secondarily with maintaining the group. How one exercises wise and efficient leadership is of vital concern to administrators.

New problems and new theory have given rise to new programs of preparation in some colleges and universities, but changes in these programs have not come fast enough. Too many colleges are still handing out a bookish gruel to future administrators. However, the signs are encouraging. More courses are now being taught by the case method, which employs chunks of experience in the form of the written or filmed case. These cases are brought into the classroom and presented to the students, who then discuss and analyze them and come to decisions which are challenged by the rest of the class. This procedure helps them develop methods of solving problems and the experience of defending their solutions.

Another innovation in administrator training is the internship, a method by which the embryo administrator gains experience in an administrative situation under the guidance of a successful educational administrator and a university professor. He undertakes responsible administrative work, usually is paid a salary for it and does his work in conjunction with seminars at a university. This enables the future administrator to find out just what is going on in the field and to get his "baptism of blood" without anyone being hurt in the process. In time the internship may become part of the certification requirements for those who lack administrative experience.

More emphasis will be placed upon producing administrators who are also *educated* men. Administrators will be more aware of their cultural heritage, of the humanities, and of the place of science in modern life.

Another new area in the training of administrators is preparation in the basic skills of administration. These include such skills as speaking, listening, business management, leading groups in group discussion, analyzing the community, developing in-service programs, and formulating salary schedules. In other words, those things which are at the skill level will be taught as such, not merely as textbook readings. This change has been needed for some time and is just now coming into effect.

A technique called the "simulated situation" is now being developed and may well be the greatest step forward in administrator education yet devised. Essentially, simulation calls for constructing a model of a school system; the student is presented with a variety of the system's problems and is expected to solve them. Instruction is designed to improve decision-making ability. The simulation method has been employed at the University of Chicago, Stanford, and Teachers College, Columbia University.

The changes in educational administration can be summarized by saying that the emphasis of preparation is moving away from bonds, buildings and buses and towards the true content of administration—people. The administrator will be thought of as the person who directs and controls the social organization called a school. He will be highly informed on the behavior of human beings. And in order that he exercise the skills and knowledge that he has, he will have to develop a set of values which will enable him to function in a democratic society. In the future, educational administration will call for skill far beyond that which is now required, and there will be men ready to meet this immense challenge.

"The movement away from domination toward manipulation was predicted by George Orwell in his clairvoyant book, *1984*. To one who studies modern organizations, 1984 is none too soon for Orwell's forewarning to materialize."

Layman Specialists Recruited for Preventive-Maintenance Program

CLEVELAND HEIGHTS, Ohio — A planned program of school maintenance, rather than the all too common hit-or-miss method, has been saving this suburban community untold thousands of dollars.

The program, now in its sixth year, is based on four principles:

1. Semi-annual inspections of the entire school system.
2. A realistic maintenance budget based on the findings of these inspections.
3. Involvement of competent laymen in maintenance inspection and planning.
4. Better understanding by teachers and custodians of the overall maintenance program.

"There is no question that the plan has substantially reduced maintenance costs," avers business manager Russell Leech, who found the plan in operation when he came to Cleveland Heights.

The story of its inception bears out the adage that "necessity is the mother of invention." In 1952 a new school board took over management of the Cleveland Heights school district. They found that the buildings had been badly neglected for a long period and that in some cases the students' safety was endangered by hazardous conditions.

The new board was alarmed by the deplorable state of its physical facilities and the huge cost of bringing its buildings back up to standard. Board president Ronald Brown, who is vice president of Tremco Manufacturing Company in Cleveland and who has had extensive experience in the building construction and maintenance field, was determined to hammer out a sound program. Working together, the board, the school superintendent, and the business manager came up with the plan which has been successfully used since.

The new program—a preventive maintenance program—required that money first be spent to repair buildings and bring them up to proper standards. This renovation took a large initial expenditure, Brown pointed out, but once a desirable level was attained, a much smaller but regular outlay of cash kept the buildings in top condition. It is in contrast to the emergency maintenance which had required sudden outlays of large sums when unexpected disasters would strike.

Brown cited two examples of emergency maintenance. When a wind storm severely damaged the roof on one of the school buildings, the former board had been forced to replace the entire roof. This expense could more than likely have been averted through regular inspections which would have caught minor damage in time to save the roof. The second instance involved the chimney of the district's power plant. The board waited until the chimney was practically ready to topple over, Brown said, and then had to rebuild the whole top section. In addition to the greater cost, this also involved a serious safety hazard.

Against this background, the new board was determined to put their planned maintenance program into effect—to catch problems when they were small.

As a first step, regular inspection tours were set up twice a year—the first in the fall before budgeting for the new year takes place, and the other in the spring to catch any damage caused during the winter and to help in planning for the summer work program. These full-scale, semi-annual inspections are now backed up with quick monthly inspections of more troublesome areas.

The fall inspection is the most complete, with inspection teams checking every building in the system inside and out from roof to cellar. Lists are compiled of everything that needs to be done, regardless of cost (inspection teams are instructed to act as if unlimited funds were available). Building principals and custodians are encouraged to accompany the inspection teams through their building and make any suggestions for additional improvements.

When a complete list is drawn up of all the work that should, ideally, be done in the system, it is submitted to the business manager; each job is then reviewed with him in order to arrive at a cost estimate.

Then comes the key step in the maintenance program. Since the total cost of all the jobs invariably exceeds the amount budgeted, Brown said, it is necessary to de-

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By Arnold Bloom of OVERVIEW. This is the first in a series of articles on maintenance practices.

termine priorities. This becomes comparatively easy when all the jobs in all the schools are listed along with their estimated cost. It can then be determined which jobs must be done immediately and which can be delayed until the next year's program is drawn up.

This priority system also aids in programming those larger jobs which must be done periodically. It can be ascertained ahead of time that a paint job must be done, say, every five years or that a new roof must be maintained at specified intervals. By planning, a proportionate share of the total cost can be set aside each year to cover these major repairs which would otherwise claim a large part of the maintenance budget in any given year.

After the business manager, working with others responsible for school maintenance, establishes his priority list, he presents it to the board for their consideration in setting up the total school budget. Under this program of planned maintenance, about 2½ percent of the annual operating budget is set aside for maintenance.

Here, Brown points out, it is important to make a distinction between capital expenditures and maintenance costs. Unless this is done, the purchase of a new piece of equipment may easily throw the entire maintenance program out of step. "Otherwise," Brown said, "if a new boiler must be put in one year, the planned maintenance program will fall behind." And there's always enough of these capital expenditures to keep regular maintenance off schedule, he added.

Once the school board has set aside a certain sum earmarked for maintenance, it is a simple matter to go down the list of priorities and determine how much can be done each year. As soon as the money is committed, the work goes forward in a planned, orderly fashion.

Because of the close inspections, very few emergencies arise during the year. At the end of the year, the business manager reports to the board on what work has been accomplished, and the board, in turn, knows exactly what work remains to be completed in the next year's budget.

The planned maintenance program has several advantages, some obvious, others not as evident:

1. Of prime importance, maintenance costs are lowered drastically once the buildings have been brought up to standard.

2. The board is assured that money is spent on the most vital projects. Establishing priorities prevents less important tasks from elbowing out major repair work.

3. The board is kept informed of what maintenance work is being carried on.

4. The plan is simple to administer. In spite of the regular inspections and paper work involved, the business manager spends less time administering this plan than the former hit-or-miss method.

5. The plan has brought about better teacher-staff relationships. Because everyone involved knows that the work is done on a priority basis and that arbitrary decisions aren't made, staff members exert little pressure to get "special" tasks done.

In discussing the plan's success, Brown is quick to credit community participation. The building and grounds committee, which he headed and which was responsible for conducting the regular inspections, was made up of school maintenance personnel plus maintenance men and top engineers from local industry. Brown felt it was important to seek their contributions—both for their professional guidance and to win the support of the community.

Twelve laymen were on this committee which reported back to the full board and the business manager. Their function was purely advisory; Brown made it clear that the business manager was still "boss"—the professional hired to oversee the operation of the schools. However, he added that in many cases the advice of this committee saved large sums of money for the district.

The two phases of the board's action served hand-in-hand to make the planned maintenance program a success. By conducting regular inspections they held repair costs to a minimum. And by involving the community and educating it to the school's needs they insured that the necessary tax money would be available to carry out the program.

Gym floors get close scrutiny in regular inspection.

Windows and window frames must be maintained in tip-top condition.

Parapet walls, a major source of water seepage, require constant attention.

Arnold Toynbee says, "This is the first age since the dawn of history in which mankind has dared to believe it practicable to make the benefits of civilization available to the human race." Realizing this objective is proving to be a gigantic task. More than half of the people on the globe cannot read or write in any language. But the people of the world, independently and yet in a unified way, are bent to the task, whether it means bringing light into the jungle, destroying an outmoded feudalism, extending opportunity to the underprivileged, or pushing back the frontier of human knowledge in the realms of science. For the achievement of such objectives, mankind has committed itself to education in 1960.

THIS STORY BEGINS on a hill called Kisubi on the shore of Lake Victoria in the Old Kingdom of Uganda, now a Protectorate of the United Kingdom. On this hill, surrounded by the dense tropical vegetation of the swampy lowlands, are Kisubi College, Kisubi Technical School and Kisubi Mission—each of them bearing a torch of learning to a once benighted land.

Until the middle of the 19th century Africa was regarded as a vast coastline—a coastline made famous by one of the world's earliest civilizations and memorialized in the tombs of its kings; a coastline that yielded gold and ivory to treasure-seeking explorers and was made notorious by its traffic in slaves; a coastline that fascinated the adventurers of the sea from the unknown sailor-traders who manned the Phoenician squareriggers from 1000 B.C., to the renowned Bartholomew Diaz and Vasco da Gama who won their places in the history books nearly 25 centuries later.

But the center of the continent remained unknown, mysterious, foreboding, and abandoned by the white men to primitive tribes who fought and sometimes ate each other, and who lived a precarious existence in competition with the most varied, most numerous and most vicious animals nature had ever assembled in one of its wild menageries. The first to defy the barriers of jungle and desert and savage hostility were missionaries. They brought with them religion, education and quinine.

In 1894, Uganda became a British Protectorate. Government concern for education there began in 1925 with small grants to some mission schools. Education for the natives in Uganda is still largely in the hands of religious agencies; Kisubi College is one of them. It was established on the hill in 1878 by the White Fathers, and it is still operated by these missionaries. It is not really a "college." It offers, to native boys only, an academic curriculum that reads like that of almost any college-

preparatory school in America. Some of the graduates enter Makerere College, which has an enrollment of about 500 and is now affiliated with the University of London, or they attend one of the post-secondary professional schools whose total enrollment scarcely exceeds 100. The Kisubi Technical School is vocational, while Kisubi Mission School trains natives for the priesthood.

The general purpose of these institutions, for which they are chosen as typical, has been to help an undeveloped people attain the ideals and skills which are enabling them to change the jungle into a home for modern man. It seems fitting to begin a story of man's commitment to education as a means of improving the world in which he lives with a citation to those institutions which are beating back the jungle and bringing light into those regions of "The Dark Continent" that some anthropologists consider may have been the original home of mankind.

The students at Kisubi swim at a beach on Lake Victoria screened with wire netting to protect them from crocodiles. Tom-toms that once sounded often in the ceremonial rites of the forested hill country or the lowlands covered with tropical swamp brush are still occasionally heard. But there has been much progress in Uganda; the jungle is disappearing.

Education, and contacts with more advanced countries have made a difference. Europeans and Asians have migrated to Uganda until only 22 percent of the total population in the age group 5–14 years is African.

With the more vigorous program in education beginning in 1925, a Department of Education was set up. Government financial support has increased steadily, and funds now come from four sources: (1) the Protectorate government; (2) the budgets of local governments; (3) school fees and contributions by voluntary agencies; and (4) appropriation from the United Kingdom. The latter is by far the largest source of funds, since its grants cover the salaries of all teachers in aided schools.

The total enrollment in the 3,763 primary schools in 1954 was in excess of 400,000; in secondary schools it was nearly 15,000 with boys outnumbering girls six to one. This is modest achievement where there are 1⅓ million children 5–14 years of age. The 1950 UNESCO census of illiteracy estimates the percentage in Uganda to range from 70–75. But there definitely is progress in the status of the natives. They, too, increasingly depend upon education to take them from where they are to where they want to go.

Uganda has done a little better with schools and education than many of the other dependencies in Black Africa. In 1870 the imperialist powers of Europe began to scramble for the potentially rich territories there. Within 40 years most of Africa was colonial except for Ethiopia and Liberia. It may mean something in evaluating the policy of colonialism that the two exceptions have made the least progress in the education of their peoples. The percentage of illiteracy in Ethiopia is estimated by UNESCO at 95–99; in Liberia, 90–95.

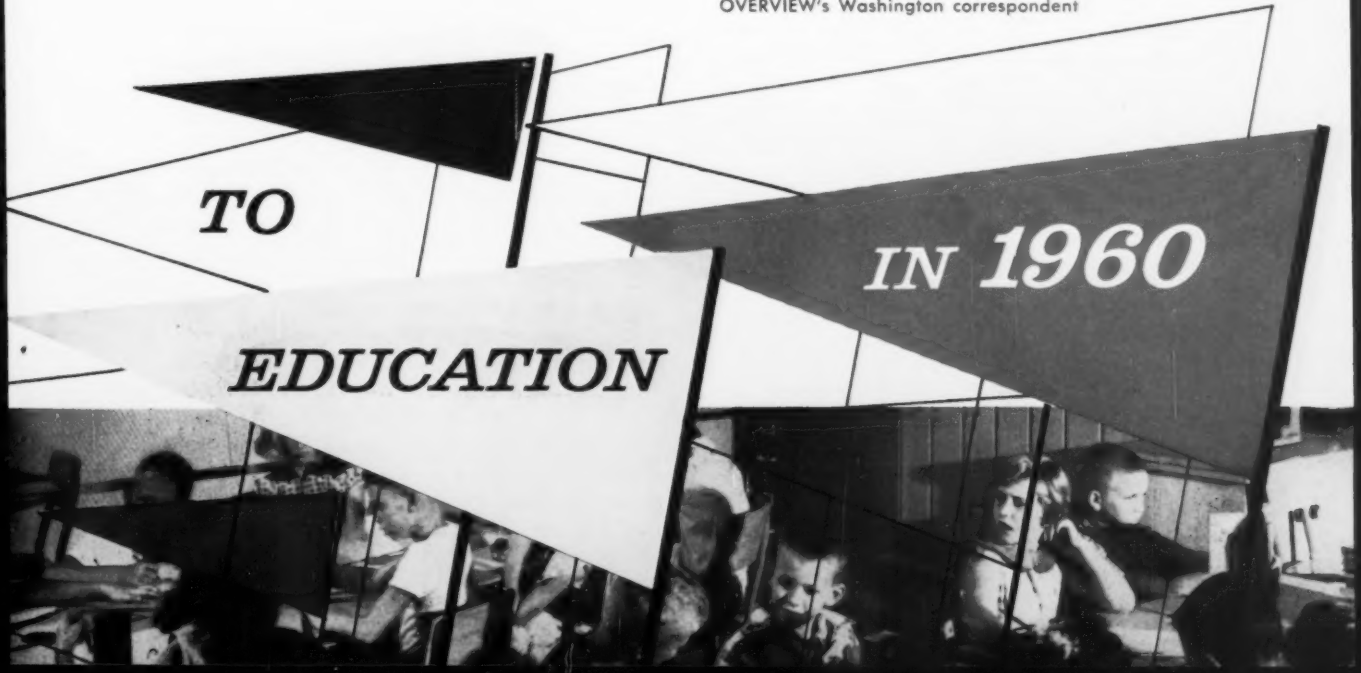
The colonies for the most part have adopted, under the guidance and with the financial assistance of the nation which acquired them, the pattern of education from which the colonists came. The native language is used in the first three years of the primary school; then the language of the colonizing country takes the student through the literature, geography, mathematics and science of the transplanted curriculum.

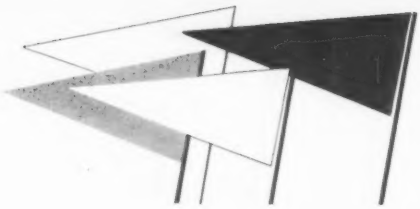
There are many contrasts in the degree to which an enlightened citizenry is being created in Africa. Nigeria, which is to receive its independence from Britain in 1961, is a good example, although it has adopted, in principle at least, free and universal education.

"I can take you to a modern university and teaching

by Belmont Farley
OVERVIEW's Washington correspondent

TO EDUCATION IN 1960





hospital in Ibadan, capital of the western region of Nigeria," says Richard Farnsworth, deputy director of the International Cooperation Administration, "where you may find medical researchers studying the parasites of the flea. Then I will drive you in five minutes to a juju market where dried monkey heads and claws and mysterious herbs are sold for the cure of all human ills."

The ICA is making significant contributions to the progress of educational opportunity in the developing countries, including those of Africa. The ICA aid is, of course, part of our national policy to carry some of the basic values of a free society to the awakening countries of the world. It usually finds a warm reception wherever it is introduced. The desire for education is closely associated with the emerging spirit of nationalism from Ghana to Lebanon, to Laos, Cambodia and Vietnam. This rugged determination for independence steps out of the jungle and desert with special strength in Africa, perhaps because there is little of the old to destroy before innovations are accepted. "To understand the natives, you must remember that they have no yesterdays," says Mr. Farnsworth. "They have no history, no literature, no continent-wide religions of their own, no traditions of the past apart from the sounds of the jungle. It is easier to begin anew here."

Commitment to an ideology behind the Iron Curtain

IT WAS NOT so easy for the USSR to begin anew. Russia *has* a history, traditions, literature, art and science. Many of these traditions must be broken or revised to fit a new political, economic and social ideology as foreign to the one the Russians have embraced for centuries as the mind of man can imagine. No novel can be written that takes a dim view of the Communist revolution, no music composed that might arouse envy for another social or political system, no type of ballet produced, or method of painting practiced that would seem to have been borrowed from the haute bourgeoisie.

Because the school deals specifically with ideology, its courses and methods must conform to party principles. The physiological sciences avoid theories that deal with inherent superiorities; psychology tests that indicate IQ differentials are not employed. Social studies that give credit to non-communist governments for great human advances are sometimes ignored or subjected to special interpretations.

Even the incidental education of the Voice of America in its attempt to depict desirable activities in a society of free enterprise is jammed at great expense, because the knowledge it brings is "incorrect."

It was necessary, therefore, to build anew in studies and methods for the education of USSR citizens. Partly as a result of the frequent "cultural interchanges" sponsored jointly with the United States, there appears to be a softening of the opposition to the arts of the Western World. This is a change in attitude that is significant, and may be reflected in the program of education in the Soviet schools.

Education in the USSR is dominated by one outstanding objective of the Soviet Union—winning world supremacy for Communism. The determination of the people in pursuit of this objective is matched by their enthusiasm for a type of education they believe will help them to achieve it. It is remarkable that a people who seem so sincerely devoted to their children so seldom describe education as a right of the individual. Documents on education represent it as an obvious duty, and the organization and behavior of the schools reflect this view. Both teachers and pupils are in the service of the state as definitely as they would be if they were in the military forces.

Since scheduled plans for the advancement of the economy in given periods of time require that most women in the USSR work outside the home, children from 2½ to 3 years of age are cared for in nurseries, called crêches. These institutions are usually sponsored by the industrial plant that employs the mothers, but they are operated under the supervision of the Ministry of Health.

While the nurseries are not formally a part of the educational system of the USSR, they are a part of the total program of child training. Kindergartens are operated by the Ministry of Education, by industries, by collective farms and other groups. Kindergartens are sometimes run on a 24-hour basis. At this level they begin to teach the Communist philosophy.

Extra-school educational programs are sponsored both by the Ministry of Culture, with some aid from industries, collective farms and trade unions, and by organizations of the Communist Party. This makes it difficult to compare educational costs in the USSR with costs in other countries. Some activities are considered education there that are recreational or political elsewhere. However, it is generally conceded that the Soviet Union expends 10–15 percent of the national income on what may properly be called education.

The "Schools of General Education" are the backbone of the Soviet system. The program consists of four elementary years and six secondary years, sometimes organized on a 4-3-3 basis. General Schools are coeducational, enrollment is at seven years of age, and attendance is compulsory through the 7th grade. In 1957–58, there were 214,162 General Schools of all types with a total enrollment of 30,624,900 students. This did not include the 2,088,000 children attending kindergarten. Classes in the General Schools meet six days a week, nine to ten months a year. As a result of this, a Russian pupil completes as many school days in

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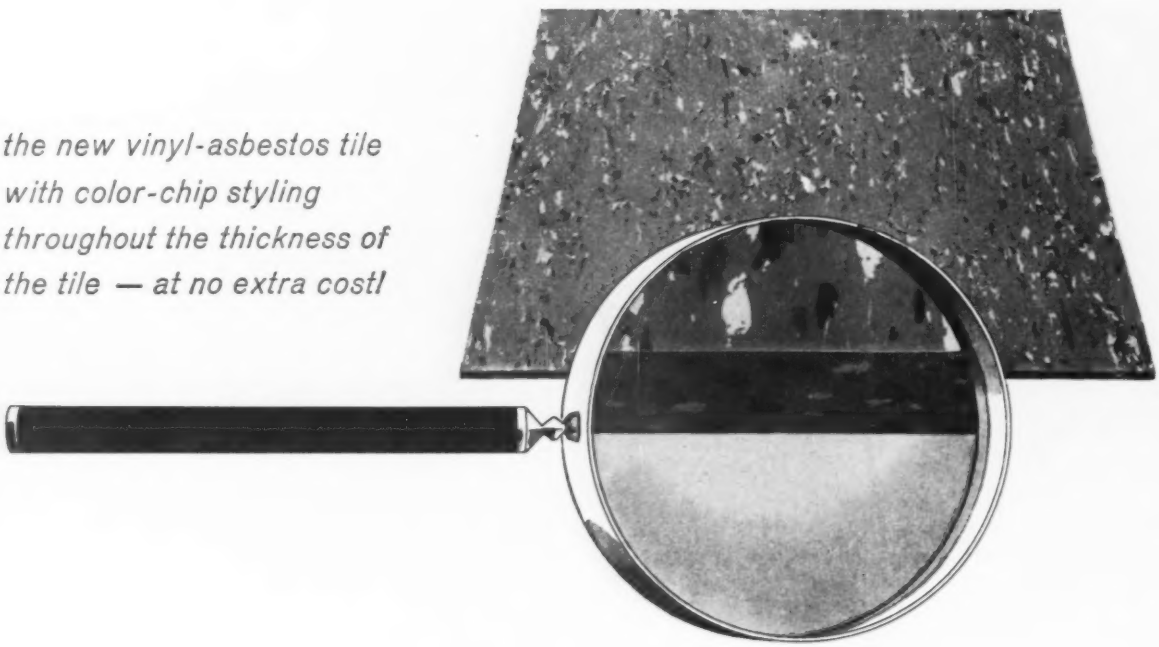

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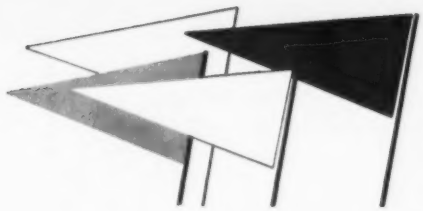


ten years as an American pupil does in twelve years.

The curriculum of the Soviet General Schools is composed principally of subjects quite familiar to the American educator. Grades 1–3 offer arithmetic, drawing, reading (Russian language and literature), physical education, manual arts and nature study. In grades 5–10, foreign languages find a place beside Russian. Nearly half of the students take English. History is an almost continuous study; American history is included, though subject, like the history of other nations, to special interpretations. Mathematics includes arithmetic, algebra, geometry and trigonometry. Science courses are physics, chemistry, astronomy, botany, zoology and anatomy. Drafting, drawing, singing and physical education have appropriate attention. "Darwinism" is especially emphasized—not as a means of teaching that the fit survive, but to explain the origin of man as a phenomenon unassociated with religion, in keeping with the materialistic character of Communist philosophy.

Special schools in the USSR feature art—there are 50 of them—ballet, 10, and music, 40.

Students who leave school at the end of the seventh year may compensate for the three years of secondary education lost by enrolling in part-time schools for working youth, or in technicums where they receive advanced instruction in technical knowledge and skills, or in various types of adult education programs including courses by correspondence.

There are 696 institutions of higher education in the USSR under the direction of the Ministry of Education. In 1958 they enrolled 1,178,000 full-time students, 80 percent of whom received financial help from the government. Students making the highest grades draw a 25 percent bonus. In theory, anyone may enter a university or institute by passing an entrance examination. On the average, the ratio of applicants to those accepted are about 4 to 1. Achievements in these institutions are notable in science and engineering. In 1958 they graduated 94,000 engineers, more than twice as many as U. S. institutions graduated that year.

The prestige of the teacher in the USSR is high. Salaries vary. Beginning graduate teachers in the General Schools receive, on the average, the equivalent of $67 a month for the calendar year. Beginning physicians, graduates of a six-year medical institute, get $60; beginning engineers, $80. Pensions are granted to teachers after 25 years of service; a teacher who continues to teach after that length of time is paid both pension and salary.

In December 1958 the Supreme Soviet enacted a new law on education which will go into effect gradually over a 5-year period. Essentially it provides for eleven years instead of ten in the General Schools in order to permit the students more part-time work experience in industry and agriculture during school attendance. Work experience of some kind begins in the first year and extends through the university. Release of students for part-time work has the advantage both of experience for the individual and of a larger labor force for the nation.

In support of the new legislation, Premier Khrushchev deplored a growing tendency of 10-year school graduates to go unwillingly to work in factories and on collective and state farms. Whatever else Soviet education does or does not do, it will not develop an intelligentsia or an élite class that enjoys favored status by reason of its education.

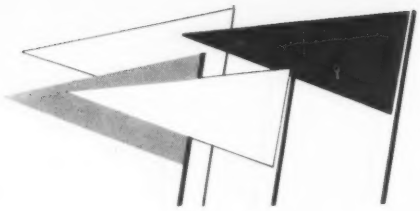
The people of the Soviet Union as a whole have a genuine interest in their schools. The ten-member team of the recent Official U. S. Education Mission to the USSR begins its report with this comment: "The one fact that most impressed us in the USSR was the extent to which the nation is committed to education as a means of national advancement." To hold national advancement as a prime objective is both a strength and a weakness. While no system of education can be justified that does not lend itself to the advancement of the society that supports it, a single standard of achievement in a highly uniform curriculum built primarily to produce the skills the state needs leaves much to be desired by those who hold as a fundamental principle the dignity and worth of each human being.

Western Europe breaks with aristocratic tradition

Most of the countries of Western Europe have political traditions unbroken for a century or more by any governmental cataclysms. Their educational traditions, too, have survived without serious molestation. This is particularly true of the curriculums in the academic elementary and secondary schools—vocational curriculums are a different matter. Curriculum status in the free public schools in England and Wales may serve as an example. Unesco's World Survey of Education reports that school studies there have become "more liberal," and adds gingerly, "within the environment of the British way of life, its heritage and history and its values and beliefs."

Although the organization charts of most educational systems in Western Europe today bear a remarkable resemblance to those of a half-century ago, there have been notable innovations in the widening of educational opportunity for the less well-to-do. Toward this goal the several nations are proceeding at somewhat different paces.

Changes extending educational opportunity include state assumption of control and financial support of education. These changes have come about slowly, as social changes do, with a bow to the "survival of the existing." Some church and other private schools in England con-



tinue to receive funds from the public treasuries as they have from the beginning of public support for schools. In Belgium and France, public support for church schools has become a leading political question.

Primary education in some nations has become free to the point of free books and school supplies. The age of compulsory attendance has been advanced in England to 15 years; France expects soon to set the age at 16.

There is greater flexibility in the choice of an educational goal, although in some countries a choice justified by examination in ability and achievement must be made at a stated period. In England and France the selection of the kind of secondary school a student will enter is made at the age of 11; in Belgium at 12; in The Netherlands at 13. This decision determines not only what kind of secondary school will be attended, but sometimes whether the student will enter college or university at all. Those who fail to pass the required examinations may enter private schools, if they wish, in order to realize their preference in the type of secondary education they will pursue.

Provisions for vocational education have opened up new opportunities for children in low-income families by offering terminal education at an earlier age than the academic schools. Vocational education is opposed strongly in England as "education for the poorer classes," especially by those who are classed as "poor." This opposition, once common in Western Europe, is being countered by the demand for increases in skilled manpower. Already the enrollment in vocational schools in Holland is greater than that of all the academic secondary schools combined.

England and Wales

During the crisis of World War II, Winston Churchill said in an address to the British Parliament: "The future of the world is left to the highly educated races who alone can handle the scientific apparatus necessary for pre-eminence in peace or survival in war."

This pronouncement crystallized a growing opinion that the gates of educational opportunity in England should open wider for the entrance of English youth. In 1944 Parliament passed an Education Act which abolished the dual system of elementary and secondary education that had contributed to the solidification of social classes in England.

The educational system in England and Wales is now set up at three levels: primary, secondary and further education. Compulsory enrollment begins at five years of age. From the age of five to seven, children must attend the infant school, and afterward the primary or junior school. A pupil remains in this school until he is eleven, which is at present the most critical year in the life of an English child. This is when he must take the 11+ examination which determines the type of secondary school he will enter. There are perhaps more who have become "angry young men"—and women—over this test and its consequences than over any other ordeal of its kind. Based on the results of this test, which is largely objective and prepared to measure ability, the pupil is sent to one of four secondary schools: (1) the grammar school, wholeheartedly academic, highway to the university; (2) the secondary modern school, which equates practical skills with academic knowledge as desirable educational achievements; (3) the technical schools, biased toward industrial arts and skills; and (4) the comprehensive school, still largely experimental, which includes elements of the other three.

It is the ambition of many parents to start their children on the road to the university, an important mark of "social status" in England. Only about 20 percent—definitely superior students—receive grades in the test which will admit them to the grammar school. About 70 percent go into the secondary modern school, and from 5 to 10 percent advance to the technical school. Those who continue in one of the other publicly-supported schools have an opportunity at about 16 years of age to take a General Certificate Examination which is an opening to the university. This examination is described as a "harrowing ordeal." A very low percentage win the award.

Formerly the grammar school was a fee school, open to the wealthier classes. The Act of 1944 put entrance strictly on a competitive basis and abolished the fees. Ability to learn, not ability to pay, became the qualification for entrance.

Outside the publicly-supported education system there are many independent schools that receive little or no help from public funds and do not conform to the general pattern of primary and secondary education. Among them are the famous "public schools" that admit specially privileged students.

France

Education in France is free and compulsory between the ages of 6 and 14. At the age of 11, the French student also takes an examination that will determine his educational career. He may stay in the primary school to the school-leaving age, proceed to the lycée, or to one of two newer types of secondary schools adapted to wider student needs—the collège moderne or the collège technique.

The lycée, with rigid classical curriculum, high standards and methods little changed from the day it was established by Napoleon in 1802, is the source of France's intellectual élite. The collège moderne offers a high type of scholarship for the less wealthy section of the population. The collège technique provides technical and professional preparation. Entrance to the university

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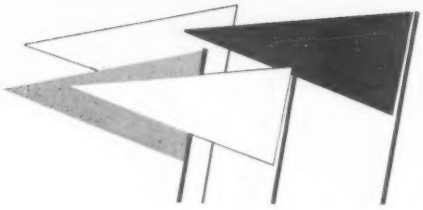

is through the lycée. Students pay tuition fees in the higher institutions of France.

Germany

Political traditions in Germany and the educational traditions associated with them have been modified several times by the fortunes of war during the 88 years between 1871, when Bismark hammered the German states into an Empire, and the present. The German people lived for 47 years under an imperial government, 15 years under the Weimar Republic, and 12 under a dictatorship. A second republic is now 14 years of age.

Each of these violent and drastic political changes brought educational change. Under the Empire, each state had charge of its own educational system; after World War I each retained a minister of education, but phases of the educational program, called welfare and culture, stemmed from the central government. Under Hitler, all educational and cultural activities were headed by a central Ministry of Education. The Federal Republic of Germany dissolved the central Ministry and turned control of the schools back to the several states.

Under the Empire, elementary, middle and secondary schools existed in three distinct parallel school systems, each beginning with the primary classes and continuing upward for a different number of years. The elementary school was open to all; the middle school was open to those of satisfactory academic standing. The Gymnasium, road to the university, received its pupils from a 3-year preparatory school, called the vorshule, for socially and economically privileged children.

Educational opportunity was widened under the Republics. The vorshule was abolished. All public school students now enter the grundshule and proceed as far as their standing as measured by examination and class records justifies. Fees are still charged in the mittelschule and the Gymnasium. A "maturity examination" is given upon completion of the latter to those who wish to try for the university.

In South America public education is a fairly recent adventure

THE CONQUISTADORES of Spain and Portugal brought to South American countries a centuries-old tradition of aristocracy. Provisions for education were made only for those of social, economic or religious status.

While South America claims some of the oldest universities in the Western Hemisphere, such as San Marcos (1551) in Peru, their disciplines were until recently almost solely classical, theological, philosophical and canon law. Domingo Sarmiento of Argentina, sometimes called the "schoolmaster statesman" in Latin American countries, visited the United States in 1847, and took back with him the enthusiasm and methods of Horace Mann to Chile and Argentina. A hundred years later UNESCO estimated the rate of illiteracy among persons of 15 years and older in South America at 42–44 percent. The average educational level of the total population in Latin America is less than the first grade.

Current political upheavals in South and Central America are a reflection of the revolution to break down the rigid stratification inherited from the past. As the common people become aware of what education can do for them they are establishing schools, but public education is a comparatively recent adventure.

Students of educational progress in South and Central America give Argentina, Chile, Uruguay and Costa Rica top billing, with Haiti and Bolivia at the bottom. Mexico and Brazil are accorded about average position. With the exception of Mexico, educational advancement may be rated in inverse proportion to the percentage of the state's population that is non-white. Since the Mexican Revolution that began in 1910, the Indians have gradually been accorded higher status, and a definite attempt has been made to educate them through extension of rural schools and community education. The illiteracy there is estimated at 54 percent, a reduction from about 80–85 in 1910.

A little more belatedly, other South American countries have undertaken universal education. According to law in all of them, primary education should be free from the ages of 6 or 7 to 14 or 15; in most countries, secondary education should be free. However, only 50–60 percent of the primary school-age population and less than 10 percent of the secondary school-age population are in school. Rural areas are especially poorly equipped with facilities and teachers. Those who complain of "double shifts" in United States schools should know that sometimes four or five groups of South American students have to use the same school building during the course of one day. The compulsory attendance law is not operative because there is a building and teacher shortage everywhere. The shortages are due to lack of money. Economists say there will not be wealth enough to support adequate schools until the people obtain the knowledge and skills needed to create and maintain a prosperous economy. This is a vicious circle.

Brazil, with an illiteracy rate of 51 percent, is in the median rank of educational attainment among the Latin American countries. Children enter elementary school at 6–7 years of age, if there is a school for them to attend. They attend five years, when they may be admitted upon passing a test of intellectual aptitude to a 4-year course called the ginásio, sometimes referred to as a junior high school. The second "cycle" of secondary education, called the colégio, is four years in length. Admission is granted upon satisfactory completion of the ginásio. Secondary education receives most of its financial support from private sources. The combined municipal, state and federal government support amount

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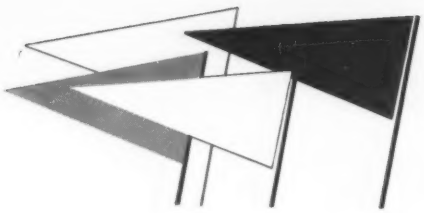

to a little more than 30 percent of the total figure.

Admission to the university is granted upon completion of the colégio; in some of the specialized equivalents now established to permit students to elect the kind of higher education they will pursue, the candidate must pass a qualification test and pay the necessary fees.

The radiating influence of American education

IN A RECENT ISSUE of *Saturday Review,* John H. Niemeyer says, "Perhaps the historians of the distant future will accord to the United States as its most important contribution not atomic fission but the first attempt of any complex society to educate all of its people to their fullest capabilities."

This commitment began early in the history of the Republic. Universal education in 1960 is the nation's most gigantic single enterprise. This nation, too, has been continually extending and bettering its educational opportunities. Not the least significant of its more recent activities to this end is the reorganization of school districts, and the transportation of some 8 million rural school children over 3 million miles of highway each day to improved schools. Other activities contributing to this objective include: the equalization of the financial support of schools within the states; the building of school curricula to serve the varied needs and abilities of pupils; the elevation of the standards of instruction everywhere; and advance in school construction that provides for the proper housing of the educational program and for the health and safety of pupils.

Education in the states is harassed, too, by such serious problems as integration, fulfilling the school's obligation in the prevention of juvenile delinquency, providing an adequate program for the gifted child, curriculum adjustment to meet the urgent needs in training for scientific and technical leadership without sacrificing the cultural and civic aims of the school.

Whatever its strengths or weaknesses, the philosophy and practice of education in America is exerting a direct influence on other nations, particularly the developing ones.

Japan is perhaps the only nation in history to abandon its own long-established educational program and adopt the educational program of a foreign country. Recent history of education in Japan includes such terms as the Dalton Plan and the Winnetka Plan. In 1946, at the suggestion of General Douglas MacArthur, the first U.S. Educational Mission to Japan, under the aegis of the State Department, recommended that its schools adopt the Latin alphabet in place of the Japanese characters. Now, more than three-fourths of the school books in Japan are printed in Latin letters.

Ceylon would go even farther; there is a definite movement there to publish many textbooks in the English language, especially those for the preparation of teachers.

The educational programs of many other countries have been inspired or modified as the result of various educational exchange projects which bring thousands of foreign teachers and pupils to the United States every year.

The United States is far from passive in rendering aid to other nations in advancing education. The International Cooperation Administration of the U.S. State Department has educational missions of some kind on every continent aiding in the preparation of teachers, the construction of school buildings, or the organization and operation of schools. Special attention is given to underdeveloped regions of Africa, Latin America, the Near East, the Far East and South Asia. In these regions the ICA has 470 American educators working on the U.S. payroll and 400 others under contract with colleges and universities whose services are paid for from ICA funds.

Out of the foreign-aid appropriations of the United States Government, 4 percent of the money goes to technical assistance and about $25–30 million specifically for education.

The United States not only conducts independent programs of aid to other nations but joins the other members of the United Nations through its specialized agencies in the promotion of educational projects abroad. The Expanded Technical Assistance Program, launched in 1949, sends experts on missions, awards fellowships for study abroad, and equips and operates training centers. The lion's share in financing these projects falls to the United States. This country has become a veritable educational missionary to the under-developed countries of the world.

Historian Arnold Toynbee says, "This is the first age since the dawn of history in which mankind has dared to believe it practicable to make the benefits of civilization available to the human race."

Realizing this objective is proving to be a gigantic task. More than half of the people on the globe cannot read or write in any language. There are 550 million children aged 5–14 in the world today, and only 300 million of them are enrolled in school.

But the peoples of the world, independently and yet in a unified way, are bent to the task, whether the specific nature of it means bringing light into the jungle, destroying an outmoded feudalism, breaking the hard crust of aristocratic privilege, maintaining political traditions that have led to success in the past, extending opportunity to the underprivileged, or pushing back the frontier of human knowledge in the realms of science. For the achievement of such objectives, mankind has committed itself to education in 1960.

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Furniture and school desks built with ***Fiberesin*** are beautiful, too. The flat, ripple-free surfaces and satiny, warm-to-the-touch finish reflect truly fine furniture construction. ***Fiberesin*** also provides ideal, approved light reflectance . . . important on school desks, desirable on other furniture. Whether the furniture is a simple tablet arm chair, a traditional desk, or a modern, contemporary dormitory chest, the selection of ***Fiberesin*** assures beauty, as well as function.

And, ***Fiberesin*** is so easy to care for! Once over lightly with a damp cloth and the top or panel looks like new. Badly soiled surfaces are more easily cleaned with any of the cleaner-waxes available. Because of the proven durability of ***Fiberesin***, it never needs refinishing . . . a most important feature to anyone concerned with operating costs!

More and more schools throughout the country are specifying ***Fiberesin*** for its durability and functionalism . . . college and university, contract, institutional and government buyers are demanding it for these features, as well as its beauty . . . if desks or other furniture are a part of your plans, we suggest you SPECIFY FIBERESIN — THE GUARANTEED MATERIAL . . . first choice of educational purchasing executives.

FIBERESIN meets all specifications and requirements of Federal Specification L-T-0041c (GSA-FSS) Type 111.

a **the exclusive fiberesin edge**

Fiberesin being a ***solid*** board throughout, presents a ***solid*** edge profile. The ***Fiberesin*** edge requires no expensive, fragile banding, lamination, or concealment. It is shaped to any desired contour and simply finished. Only ***Fiberesin*** offers this solid use-and-abuse resistant edge that will withstand severe mishandling without damage! The elimination of edge banding also eliminates a sanitary hazard . . . there are no crevices to trap and hold food, milk, dirt, and germs.

b **the perfect fiberesin surface**

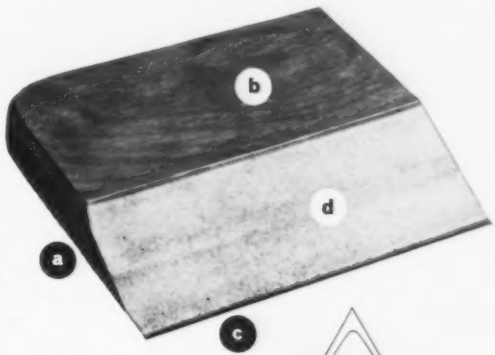
Fiberesin is molded under controlled heat and high pressure against pre-finished press plates . . . there is no possibility of surface irregularities, glue lines, "telegraphing" grain patterns, or high spots. No ripples or shadows mar the appearance of ***Fiberesin***. The molded-in surface finish has the soft, satin effect of fine furniture.

c **identical surfaces**

Physically identical top and bottom surfaces insure a warp-free board and form an impenetrable barrier against moisture absorption.

d **"one piece" from face to face**

Because of the complete interflow of resins under the controlled heat and pressure, the materials fuse together to complete a chemical and physical reaction. The resulting panel is a single, solid piece from face to face, edge to edge. The panels are structurally balanced, dimensionally stable, twist and warp-free . . . there is no possibility of delamination or glue line separation.



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how do you PLAN WHAT to tell the ARCHITECT?

by Charles D. Gibson

A set of educational specifications is more than a list of statistics. Here a noted school planner suggests the ideal way to communicate with your architect.

PROGRESS IN SCHOOL BUILDING DESIGN will be spotty until educational administrators firmly believe that the physical plant controls to a large degree the success of the teaching-learning activities it contains. Indeed, they must recognize that the plant is an integral part of the total educational program. The business of writing a set of educational specifications for a new building, therefore, begins with an analysis of the educational program itself.

Any educational program analysis should start with a comprehensive look at overall community-school relationships—how each can serve the other. This approach to educational program planning includes the community as a whole, since there are many potentials for assisting in the teaching-learning processes outside the formal school plant. It abandons the narrow concept of a school site of from 10 to 1,000 acres; instead it includes stores, factories, offices, courts, government buildings, museums and TV and radio stations as necessary parts of an educational program. The "formal school" aspects of such a community-based program would still take place in a school building but both space and scheduling design could depart radically from tradition.

The first step in analyzing educational building needs is to set down in writing the objectives and policies which are to determine the educational program of a school district and against which its success is to be evaluated. Such a statement is necessary because it puts responsible school officials on record as to the goals they seek through the school program.

What are ed-specks?

Educational specifications are the written statements that explain the method for implementing these stated educational policies—the most important contribution, therefore, that teachers and curriculum specialists can make to school building design. A well conceived set of educational specifications, meticulously and creatively translated into plant facilities, is the only guarantee that a school building design will be functional rather than imposed. They are the "preliminaries" that are necessary before anyone is ready to talk about a specific planning project.

This article is adapted from a talk Mr. Gibson made to a recent school planning workshop sponsored by the Association of San Diego County Administrators and the Department of Education, San Diego County. He is chief of the Bureau of School Planning, California Department of Education.

In my experience, the term "educational specifications" has become a semantic casualty. What does it mean? Interpretations of the term generally fall into one of three classifications:

First—To some people educational specifications—or ed-specks—mean a listing of finely-spun educational philosophy and theory to be given to an architect for interpretation into space and facility needs.

Second—There is the group that belongs to Bill Caudill's famous AIAA (American Institute of *Amateur* Architects) who believe they must draw out in minute detail the exact plan of space and placement of equipment for the architect, who obviously would be lost without such assistance.

Third—The rare soul who really understands the true meaning of the term sits down and writes out in detail for his area of the curriculum how many students do what—for how long—requiring what kind of space and equipment. He describes a "class hour" or a "school day" from the time the students come chattering into the room until they leave. He relates the kinds of student activities, the type of equipment used, the size of the group, whether the activity is noisy or quiet, the space necessary, the supplies utilized and the storage needed.

Educational specifications should describe the *methodology* of teaching. They must explain the plant implications of sub-grouping a class of 30 students for instructional purposes. Unfortunately, methodology is usually still taken for granted. But if we can't tell the architect the methods of teaching used now and envisioned for the future, we cannot expect the right kind of building from him.

Educational specifications do not need to begin with theory. Rather, they are prepared: (1) to clarify the thinking of teachers and curriculum people, concerning what they teach, and how; (2) to give the architect an understandable bill of specifics against which to design facilities; and (3) to evaluate the results of a building program and to assess the penalty of compromise. But they carry no obligation to make an educator out of an architect and, conversely, they fail if they attempt to make an architect out of an educator.

In simplest terms, they should interpret the wonders of art into the things students and teachers *do* to learn to enjoy the wonders of art.

Who should prepare educational specifications? Just like most other activities, some should and some shouldn't:

1. Number one on my list of who shouldn't prepare ed-specks is the *unqualified staff*. A staff that doesn't have the foundation for projecting educational methodology trends has no business preparing educational specifications for the design of a building that will have long-range educational implications.

2. Next on my list is the *unqualified administrator*. He is the one who has adopted what I like to call the Bunker Hill attitude, or the don't fire until you can see the whites of their eyes philosophy. He has waited to be absolutely sure those kids swarming the sidewalks and streets are really going to show up in school. He always has what he thinks is a good reason for delaying action until he gets three years behind in a building program—but then watch out, stand back—for here he comes, there he goes. No time now for such luxuries as carefully prepared educational specifications.

3. Next on our who-shouldn't list we find any combination of the qualified staff-unqualified administration, or qualified administration-unqualified staff. For example, "textbook teachers" working in a district where the administrators and supervisors want to do something beyond textbook education—or vice versa; educational specifications prepared by a teaching staff under those conditions would lead only to a negative result.

4. Who then should prepare this important document—and when? If educational specifications are to be vital and useful, they must be prepared by a *qualified* staff and a *qualified* administration assisted by *qualified* out-of-district consultants. The development of a specific set of ed-specks for a building project should only be a point-in-time culmination of a continuous staff process of curriculum evaluation with space implications. No curriculum study is complete or valid until it has been translated into space and equipment requirements necessary to curriculum objectives. Educational specifications for school buildings, facilities and equipment should not be a special chore associated with a specific building project. They should be a continuing part of the written policy which says that school buildings and equipment are part of the total educative process and that educational programs and educational facilities cannot be either planned or evaluated as separate factors.

Under the do-it-yourself approach recommended here, there is no valid place for a contract survey, but there is lots of place for competent consultant services. These consultant services are needed in direct ratio to the competence of the local district personnel in handling their own problems, but should always be used for the review of what is going on outside the local area. It is axiomatic that persons closest to problems are most sensitive to the nuances of these problems. Final decisions should be made by those persons responsible for carrying them out, but by the same token, local persons have the responsibility for "unlocalizing" their thinking before making vital decisions.

It takes leadership

Organizing whoever is to prepare educational specifications into a smoothly operating, productive group is one of the key steps in any analysis of educational building needs. All the competence in or out of the district won't produce an understandable statement of ed-specks unless it is properly organized and used. The chief administrator has traditionally assumed this role of leadership. Without intending to belittle chief administrators at all, this practice no doubt has led to some of our present school building problems. The head man in a school district of any appreciable size simply

cannot add such a responsibility to his already considerable duties and do justice to either.

Many school districts would save much time and many dollars if they established a top administrative position with adequate staff to handle the educational-needs analysis of the district. Such a step would put school plant planning and design in proper relationship to its function in the total educational picture.

However this leadership is provided, the person providing it must have the necessary time to devote his full energies to this assignment, must understand current and projected trends in teaching methodology, and must be able to work well with professionals outside the field of education. Particularly he must be able to coordinate educational and architectural planning.

A partial list of those who should play a role in analysis and educational specification would include board members, superintendent, business manager and staff, curriculum director and staff, principals, teachers, pupils, operational personnel, consultants and citizen advisers. Anyone who is asked to be a part of a planning team should have his specific role in the overall effort made abundantly clear. First, a balanced, competent team should be brought together, and then each member should be told about his area of responsibility. The leader of the group should see to it that each competence stays in its own field.

When to bring in staff

The real problem in staff participation in planning includes not only the role each should play, but also —and just as important—the *timing* of those roles. When shall participants be introduced to the problem? When shall their contribution be sought? At what stage of the production shall they be asked to reappear upon the scene?

Our experience indicates several points about participants and timing:

1. They must see themselves as part of a group developing plans and interpreting policy before their contributions can be valid.

2. They must be asked to make their first contribution in the *idea* stage of production. If such people as business managers, curriculum directors, teachers, custodians and pupils are going to be asked only to comment on developed plans, you might as well forget them—save their time and yours.

3. They must become involved in the planning process at the time their specific competence is most pertinent to the planning.

4. They should be re-contacted at various stages of planning development for a critique of the work to date.

5. They should be given a tour of the facilities which resulted from their work and an explanation of how the finished product complies with or deviates from the original specifications.

Using participants

While we cannot discuss here the roles and timing of all the possible participants in the development of educational specifications, I will mention two: the teacher and the architect.

The teacher. A study made in California of teacher participation in school planning revealed that valuable teacher resources were often not used to potential advantage in school planning. It indicated that when departmental planning committees consisted of volunteers from the entire staff, planning was cumbersome and inefficient. Teacher participation was most successful when limited to describing teaching techniques and scope and content of courses and to analyzing preliminary drawings presented by the architect. But when teachers are asked to participate in the preparation of ed-specks, they seem to be miscast.

The architect. By architect in this instance, I mean the job captain from an architectural office who has been assigned to a specific building project. He should not be confused with the "principal architect" who is the job getter in most firms and generally the one who makes all contacts with the client. The architect, as we speak of him here, is the project architect or job captain who is responsible for the production of the plans for the new school building. He should sit in on all major planning sessions on ed-specks. This can hamper good results if the architect is prone to sell his own "canned" solution. But this hazard can be met by a skillful leader who would make sure that the project architect gets first-hand the background discussions behind the written words. While he should be present primarily to listen, there are times when a few of his prudent words of caution can keep planning discussions in line with district policies. His very presence tends to discourage the ambitious members of the AIAA who can express themselves only by making crude lines on graph paper.

There are many fine procedures available to school district personnel for use in program analysis. One called "Procedures for Appraising California Secondary Schools," published by the California Association of Secondary School Administrators, carries this preliminary statement on written objectives:

A good secondary school . . .

. . . makes energetic efforts to know the details of the wide variation in interests, needs and abilities which exists among its pupils.

. . . is constantly redefining and reappraising its goals in terms of the changing needs of society.

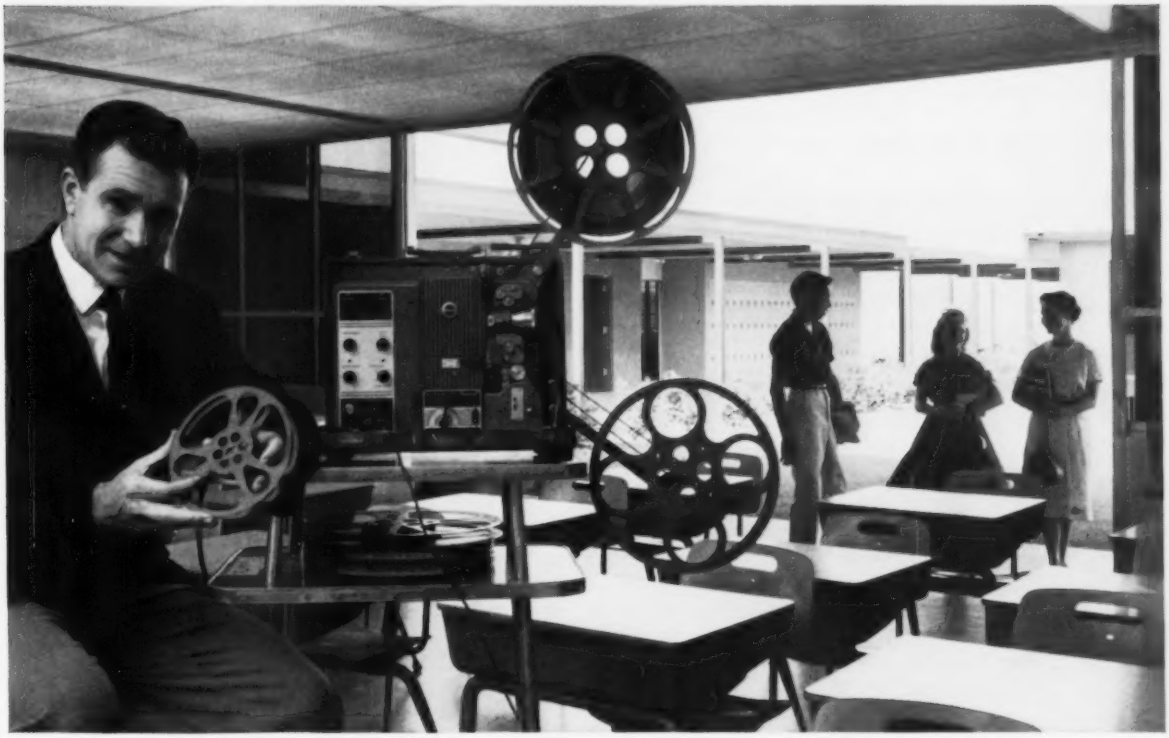
. . . evaluates the outcomes of its program in terms of the development of individual pupils and the successes of its graduates.

. . . is continually striving to improve its methods for encouraging the development of individual pupils.

. . . is concerned with providing a staff, materials of instruction and physical facilities which will insure the maximum progress of each pupil toward the goals of the school.

An appraisal of your educational program against these objectives would make a fine beginning point for any school district seriously interested in self-analysis of its educational building needs.

At the NEA prize-winning Alamitos Intermediate School, Garden Grove, California, John A. R. Reed, Principal, says:



"Even in these 'outdoor' classrooms, showing movies is no problem with our Pageant Projectors."

"Fresh air and sunshine belong in the classroom. So we built our school around patios, using big, tinted windows and sliding doors in every room. But even without blinds, our Pageant Projectors provide brilliant, detail-filled movies."

Looking for a way to end washed out movies, even in hard-to-darken areas? Then try the Kodak Pageant 16mm Sound Projector. You'll get brilliant screen images because the Pageant's Super-40 Shutter puts 40% more light on the screen than an ordinary shutter at sound speed. Take the portable Pageant anywhere. Set up in minutes. And you're ready to roll with a show that takes full advantage of the impact of sound films.

Any Kodak AV Dealer will demonstrate the Kodak Pageant Projector in your school, at your convenience. Or you can get full details by writing for Bulletin V3-22.

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the span of the educational

Four vast systems of education are coping with problems, championing causes and contributing to the progress of the nation

The first system of education in the United States is composed of the elementary schools, high schools, colleges and universities, both public and private —the regular school system.

The annual expenditures in the traditional school system are something along the order of $18 billion. The outlay of the public elementary and secondary schools in the year 1957–58 was close to $13 billion. The expenditures in the private elementary and secondary schools were about $2 billion. Spending in the public and private institutions of higher learning reached an approximate $4.5 billion.

Total enrollment in all of these schools was about 43 million students. The rate of growth in these schools is set at more than 2 million people a year and expenditures are rising more than $2 billion a year. These increases are likely to continue for a substantial period of time.

The salaries of the one and one-half million teachers in the regular system of education actually are below a competitive level but they have been increasing 4 or 5 percent a year for some time. Teachers' salaries fell behind during the second world war and consequently must be increased faster than average salaries to regain their financial lead. This is one of the major problems which the regular system of education faces.

The regular system of education is spending close to $4 billion a year on buildings and educational equipment, and the sum is mounting sharply each year. This is the school system people talk about when they say we spend approximately $18 billion or 3–4 percent of our national income on education. However, this is far from the total program of education in the United States.

The second system of education is a very broad and far-reaching program run by industry.

Industry is spending over $7 billion this year on research and development, twice as much as the colleges and universities spend on everything, including extracurricular activities.

Industry has recruited about 200,000 scientists and engineers plus another 200,000 technicians and assistants in its research ranks as compared to the 16,000 full-time science researchers in colleges and universities.

The education and training programs of industry are about as broad as the programs of the universities. The various parts of those industrial programs might be grouped under four headings: 1) scientific and professional, 2) management, 3) technicians, supervisors, operators, 4) general education.

In the highly technical areas, industrial training programs are probably the best to be found in the country. For example, many of the most advanced courses in electronics are offered by the industry; the same is true of technical instruction in the oil industry, electrical, chemical, communications, drug industries and others.

Industry is much more flexible than the universities in the way it organizes and runs its courses. It is continually trying new methods, new processes, new products. It seems to adjust better to change than do the universities with the result that industry has developed innumerable ways for training management.

[For a more detailed account of this second system, see "Education at Work" on page 44.—Ed.]

By Professor Harold F. Clark, Teachers College, Columbia University and OVERVIEW's economic analyst.

spectrum in the United States

The third system is that conducted by thousands of voluntary organizations.

The League of Women Voters, labor unions, and church groups are examples of large organizations with vast educational programs. The thousands of courses offered by these organizations range from the history of art to apartment house management. About 48 million people are studying in some kind of group organization. This would be several million more people than are enrolled in the elementary and secondary schools, colleges and universities.

The League of Women Voters runs courses, seminars, discussions and lectures on current problems. The unions offer courses on current issues—wages, hours, conditions of work and general economic conditions. Church groups

almost cover the field of ethics, morals and religion. Professional organizations give elaborate courses to continue the education of its members. Doctors attend courses in the county medical societies; engineers benefit from all sorts of special programs while ministers in a community form various study groups.

There are approximately 100,000 persons engaged as full-time teachers and directors. They use the help of about 5 million part-time teachers aiding in discussion groups and in teaching. Use of voluntary and part-time teachers is an important characteristic of the educational programs of these groups, and here some of the most ingenious teaching methods are found.

A large fraction of the cost of the educational programs of these voluntary organizations is borne by the organization itself. The widespread use of volunteers as teachers greatly reduces the salary outlay. There is also a strong tendency to use buildings that are not fully utilized otherwise which in turn reduces the building cost.

The fourth system is composed of the many processes people have developed to carry on with their education largely on an individual basis.

About one million people are taking correspondence courses each year. The public libraries play a large role in making information available for people who want to further their education. Technical books and magazines play an increasingly large part in educating many individuals. Museums and art galleries provide another source for self-education. Some individuals find that they can continue their education by use of radio and television. Singly, not one of these items is enormously important, but combined they make a real addition to the educational scene.

All methods of self-education probably add the equivalent of well over one-half year to the average amount of formal schooling for the entire population. One of the major aims of all formal education is to provide people with schools that will make it possible for them to continue their own education.

The range and variety of education offered in the United States is not fully grasped largely because no effort has been made to get a picture of all of its parts. But we must recognize that all of these programs have to be organized and administered. It is a tremendous job.

How air conditioning can pay for itself in a new school building

1. *An air conditioned building can cost less to build*

2. *Maintenance costs are reduced*

3. *Teaching efficiency increases*

CITY	% classroom time, during the regular school year, that outdoor temperature is above 60 degrees
LOS ANGELES	86%
DALLAS	62%
WASHINGTON, D. C.	44%
ST. LOUIS	43%
CLEVELAND	34%
CHICAGO	32%
MINNEAPOLIS	25%

RECENT STUDIES concerning new school buildings bring significant facts to light.

You can build a modern, fully air conditioned school building *for less money* than it costs to build a conventional building, because it can be more compact. If the building is designed for air conditioning, the savings can more than *pay the cost* of the air conditioning equipment.

Moreover, the *operation* of the air conditioning *pays for itself*—due to greatly reduced cleaning, painting and decorating bills.

Most important, there is an increase in faculty and student efficiency. This means better teaching, better learning. Studies show that because of body heat and the sun's rays it takes outside air below 60 degrees to cool a school building without air conditioning.

When outside air is above 60 degrees, classrooms are sure to be uncomfortable. Above are some U.S. Government figures, showing the percentage of school-year classroom hours, in various cities, when the temperature is above sixty degrees.

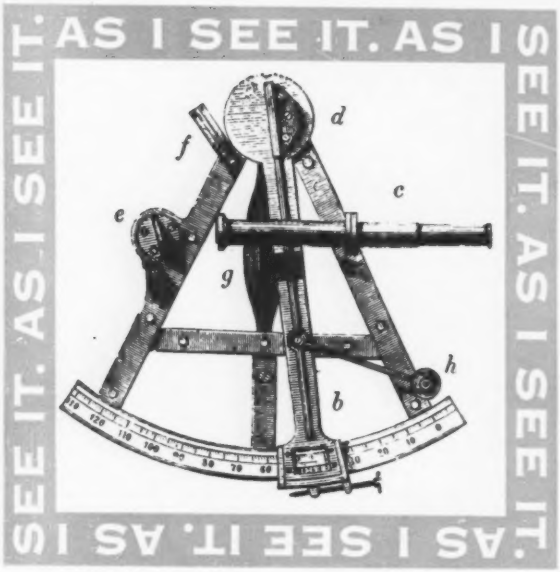
These are the times when air conditioning is *vital*, if adequate efficiency in teaching and learning is to be maintained. Of course, these figures do *not* include the important summertime. With an air conditioned school, summer study is more popular. The school can be used in the hottest weather, day and night. It can also be utilized for recreational activities that would be impossible without air conditioning.

The other benefits of air conditioning—in terms of increased comfort and cleanliness—are immeasurable. Today, more than ever before, it is important to examine the economies of air conditioning *before* you build. See your architect or consulting engineer. Or write: Minneapolis-Honeywell, Department OV-1-106, Minneapolis 8, Minnesota.

Honeywell

H HONEYWELL First in Control

Classroom comfort means better learning, better teaching. This is the attractive Honeywell Pneumatic Round Thermostat. It is used for both heating *and* air conditioning, and is the most accurate pneumatic thermostat available. With one in *every* classroom or recreation area, the teacher can adjust the temperature to fit the specific activity. Remember, only a thermostat *on the wall* can sense the temperature the way an occupant does.



predictions and portents

by Walter D. Cocking

The future will see a larger percentage of college-trained youth entering the teaching profession than is now the case.

There will be a marked increase in amount and kind of material, supplies, furniture and equipment used by schools and colleges during the immediate years ahead.

An important development during the next decade will be the coordination of the resources, facilities and staff of the agencies serving children and youth in most American communities.

Each year during the 1960's from 12,000 to 15,000 new educational buildings will be constructed.

The enormous increase in enrollment of adults will continue each year for the indefinite future.

Arranged study for secondary school and college students in various other nations will continue and the number of such students will constantly increase.

Educational programs sponsored by business and industry will become more numerous and diverse. Arrangements will be worked out for the granting of degrees and certificates.

Total community planning, in which educational planning of new plants will be an integral part, will evolve slowly but surely.

The team concept of educational administration will be generally accepted by schools and colleges.

There will be a growing acceptance by the people of the importance of teachers to community excellence.

Teaching as an occupational career will gain in social and economic status during the next 25 years. It will take on the marks of a profession and appropriate standards will be established.

Criteria in terms of preparation, experience and values will be proposed and finally accepted by the majority of boards of trustees for the selection of the chief administrator of colleges and universities.

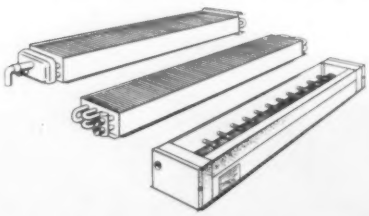
Vocational education in the years ahead will take on new dignity and importance. As we move into an era of full-blown automation the skilled worker will become a prime necessity for our economic well-being. In his preparation much greater emphasis will be devoted to his cultural knowledge and understanding.

The present type of school bus powered by a gasoline engine ultimately will be discarded as was the horse drawn vehicle commonly in use 40 years ago. A faster, safer type of transportation will take its place.

Walter D. Cocking's "As I See It" column of the last 16 years will appear as a regular feature of OVERVIEW. Here it takes the form of predictions.

Worth Noting: Features of the Nesbitt Syncretizer Heating and Ventilating System

EFFICIENT HEATING ELEMENTS

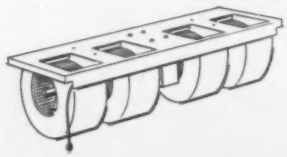


FOR STEAM—with "trombone" distributing tubes that assure uniform discharge temperatures at all times.

FOR HOT WATER—with 4-pass and 8-pass circuiting for maximum heating economy from small water quantities.

FOR ELECTRICITY—with 5, 7, or 9 finned tubular elements for safe, rapid heat transfer and metered economy.

LIFETIME MOTOR AND FAN ASSEMBLY



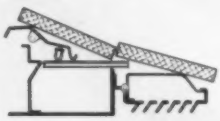
QUIET FANS—direct-mounted and balanced on a solid steel motor shaft without outboard bearings, couplings, etc.

SERVICE FREE MOTOR—totally enclosed, quiet, variable speed, split-capacitor type, with no internal starting switch; only one moving part; oiling but once a year.

ONE-PIECE ROLL DAMPER

UNIQUE—the simplest known method of regulating the air mixture in a unit ventilator; pivots on two nylon bearings under automatic control; requires no maintenance.

SEPARATE EASY-ACCESS FILTERS

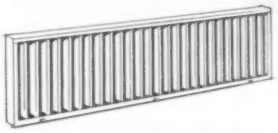


FOR GOOD MAINTENANCE—simply lower the room-air grille and the indoor-air filter drops for removal; open an access door and the outdoor-air filter pops to hand; divided large-area filters save money; easy access encourages regular cleaning or replacement.

OUTDOOR AIR-VOLUME STABILIZERS

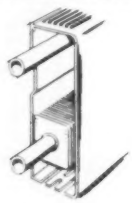
ECONOMICAL—two pivoted vanes in the outdoor air compartment close progressively under wind pressure so that only the required amount of fresh air can enter; saves up to 50% fuel on windy days and stops cold blow-through.

WEATHERPROOF OUTDOOR AIR INTAKE



EXCLUSIVE—all-aluminum, only 2⅛ inches deep, for prefabricated panel or masonry walls; Z-shaped *vertical* louvres make it load-bearing and prevent air-borne rain or snow from entering the incoming air stream.

WIND-O-LINE FINNED-TUBE RADIATION



ADDED PROTECTION—with the Nesbitt System, finned-tube radiation all along the window wall independently protects against downdraft and excessive radiation of body heat to cold surfaces. Working together, Nesbitt Syncretizer and Wind-o-line maintain "the thermal environment most conductive to learning."

Nesbitt Comfort Conditioning: More Learning Per School Dollar

Introducing

THE Nesbitt 600 LINE

New Syncretizer
Unit Ventilator
and more versatile
Storage Units

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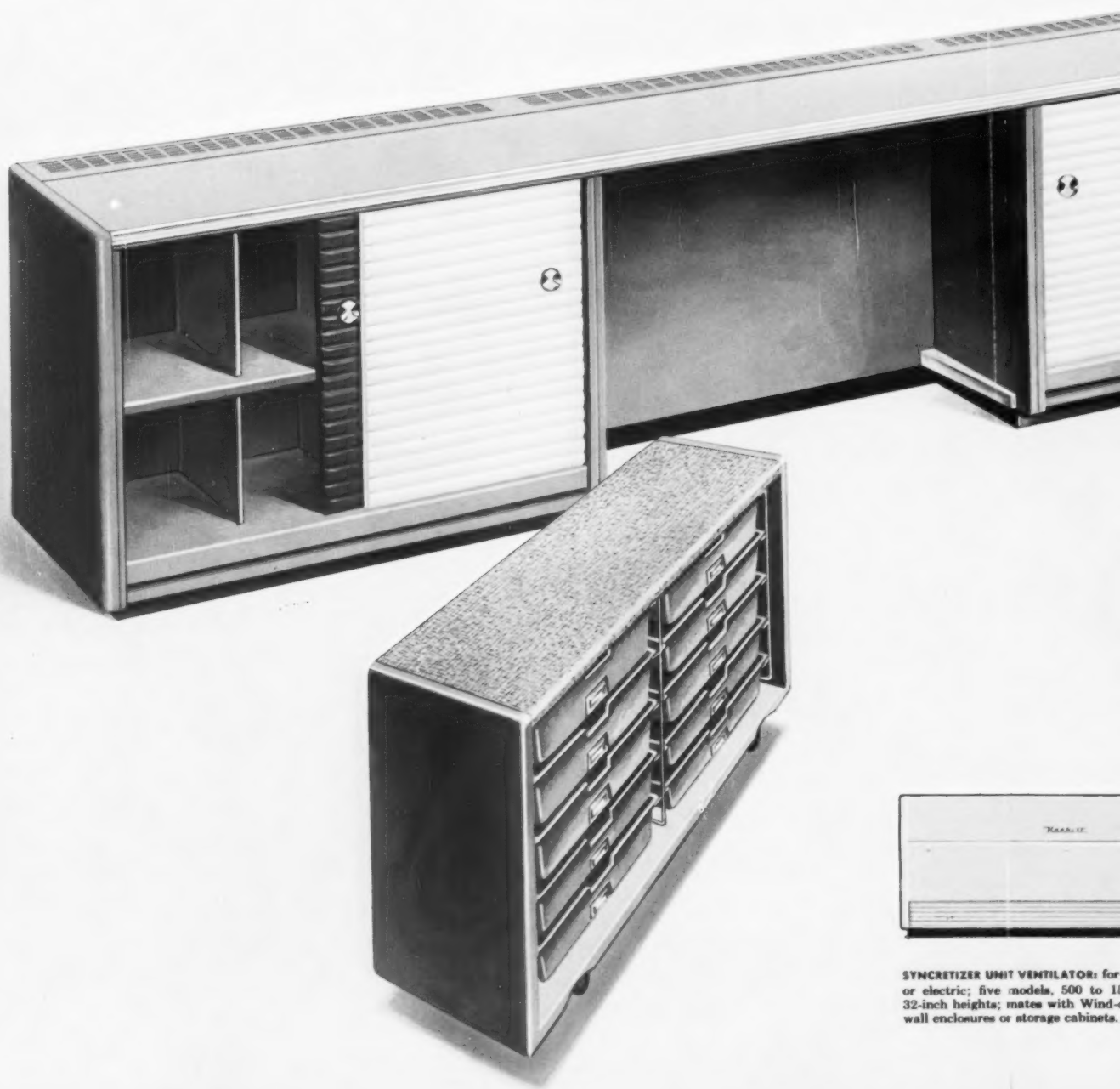

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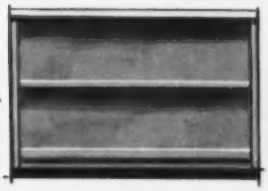

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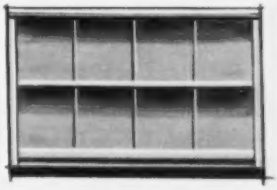

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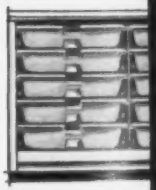

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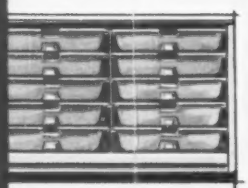

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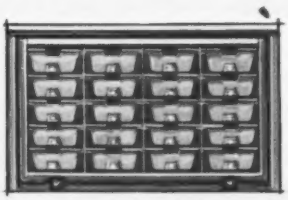

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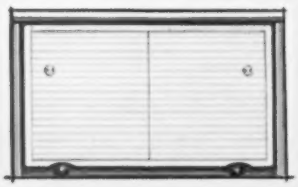

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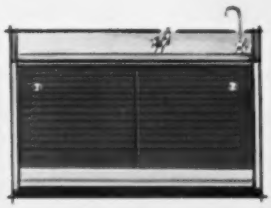


SINK-BUBBLER: stainless steel top; 24- and 28-in. heights; separate bubbler if desired; 4-ft. length; closed storage compartment.

THE EDUCATION EDITOR–

Making "News" Out of Information

Have you ever wondered, in thumbing through the education section of a national news magazine, or in perusing the latest Sunday syndicated magazine article on school bond proposals, how that particular high school got its name into 10 million homes?

Perhaps you saw the recent cover story in Newsweek *on "Our Good Teenagers" and wondered why that particular topic was chosen and how the information was obtained.*

OVERVIEW *asked the education editors of* Time, Newsweek *and* Parade *these questions in an attempt to find out just what makes news. This is what they said.*

THE PURPOSE of a news magazine, according to Sheward Hagerty, education editor of *Newsweek,* is 3-fold:

1. To report what's going on. "A news magazine is a magazine of record."
2. To uncover and reveal.
3. To interest the reader.

News is not hard to come by. The offices of a national magazine are deluged with press releases, magazines and newspaper clippings every day. The problem is not one of finding news, but of extracting from the mass of material what you feel to be of most significance.

"Significance is the key word," says Mr. Hagerty. "And once you have determined what you believe to be the significance of an event, it must be analyzed and explained to the reader."

Mr. Hagerty uses the sociological approach in judging significance. He is more interested in what is happening in the world intellectually than he is in what is happening in the narrower, more parochial area of formal education.

"For instance, interesting things are happening in the field of law which are related to education," says Mr. Hagerty. The use of leisure time is another example he gives of an important sociological problem with implications for education.

But significance is not the only ingredient of a good news story. There is another, described by Robert Shnayerson, education editor of *Time,* as "the dramatic, the human, the specific."

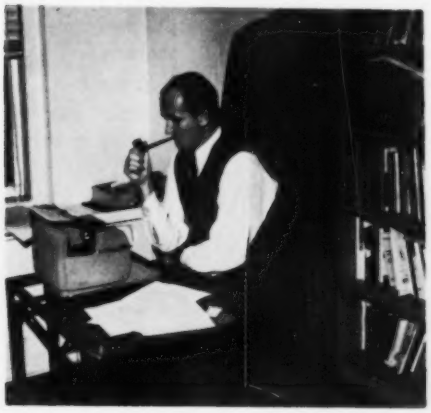
"We're interested in stories about people," says Mr. Shnayerson, "since education, after all, is concerned with people." Pertinent names make news, but so does the story of a slum child who made good.

A routine announcement that Joe Blow, formerly lecturer on education, has been appointed associate professor at X University, is of interest only to his wife, his children and perhaps his creditors.

In composing an education section for *Time,* Mr. Shnayerson, with the assistance of Anne Hopkins, education researcher, looks for four stories in four of the following categories or combination of categories:

1. Straight news story (something in the news that week.)
2. Case study, what *Time* calls a "takeout." (the dramatic, the specific.)
3. Roundup (a story with significance and broad, sociological implications.)

Text and photographs by Ethel Malvik



"The significance . . . must be analyzed and explained." Hagerty of Newsweek.

"A great deal of research, and a great many staff conferences, precede any decision to publish a story." Shnayerson of Time.

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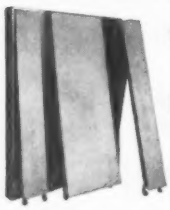

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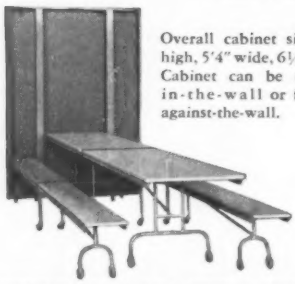

Overall cabinet size 7'2" high, 5'4" wide, 6½" deep. Cabinet can be recessed in-the-wall or fastened against-the-wall.

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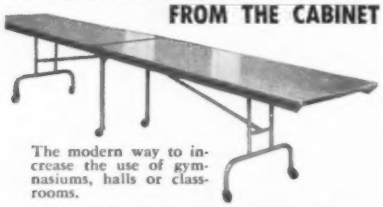

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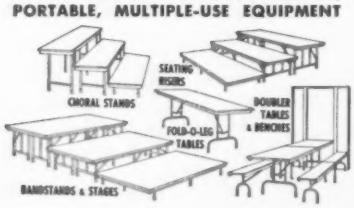

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Communications Clinic (continued)

4. Personality piece (the human.)
5. Book review (pre-publication.)

"A great deal of research, and a great many staff conferences, precede any decision to publish a story," says Mr. Shnayerson.

When the stories have been chosen, they must be mixed so as to form the perfect blend. In mixing them, the education editor is performing a function not unlike that of the housewife planning a meal: the serious is balanced with the human and the personal; the foreign with the domestic; the pedantic with the humorous.

And all of these ingredients must be served in a manner appetizing enough to catch and hold the interest of that elusive person, "the reader." Information can neither enlighten, educate nor inspire a reader to vote for the next school bond proposal unless it first catches his interest.

Newsweek has spent millions of dollars on surveys aimed at finding out who their "average reader" is. The results show only that he is an intelligent, reasonably well-to-do member of the community.

As such, he is interested at the moment in juvenile crime, our competition with Russia and the rest of the world, "quality versus quantity" in education, and financing of schools, especially in suburban areas where taxes are skyrocketing.

"Recording" the news is not a function of the Sunday syndicated magazine, since stories may appear as much as six months after they are begun, but a "news" angle is as important to the Sunday syndicated as it is to the news magazine.

America's interest in education skyrocketed in 1956, before Sputnik was launched, says Edwin Kiester, Jr., associate editor and *ex officio* education editor of *Parade,* a Sunday syndicated magazine with a circulation of 10 million. Since then, education articles in *Parade* have had consistently high readership, consistent enough to justify 12 to 15 a year.

Both the Sunday syndicated magazine and the news magazine receive story suggestions from school administrators. Too many of these stories, however, are what Mr. Hagerty calls the "last week you said you wanted to see this happen and now it's happening here. Why don't you print it?"—type story.

"If you say," says Mr. Kiester, "that the quality of language teaching in the U. S. is poor, you're bound to get a 4,000-word story from a school administrator telling you how good the language program in *his* school is."

This is fine, except the program, to be worth writing about, has to have a news angle, be interesting, be significant, and be one which can be easily imitated elsewhere.

Too often, school administrators forget that the national news magazine and the Sunday syndicated magazine are not addressed to members of the profession. Stories received from school people, says Mr. Kiester, tend to be either too local or too academic.

"Administrators put too much emphasis on the history of education or the history of a movement, and too little emphasis on the problem and what can be done about it."

School administrators can be helpful in another way, however. An education editor, because his back-

"A story may have great news value and be unsound. We need protection from that sort of thing." Kiester of Parade.

ground is usually in communications and not in education, relies very heavily on contacts within the profession.

"A story may have great news value and be unsound. We need protection from that sort of thing," says Mr. Kiester. "The school administrators who manage to get their names in the news at least once a month are those with a reputation for giving cordial, reliable and succinct replies to questions from the press."

"Administrators have become too defensive," says Mr. Kiester. "They are more interested in telling you what is *not* true than they are in telling you what *is* true."

Mr. Hagerty thinks this defensiveness is to some extent justified, however, since our education system and its administrators have been made the scapegoats for so many social ills in the past few years.

And, in spite of this, Mr. Hagerty, who was made education editor of *Newsweek* only a few months ago, has found administrators to be amazingly cooperative, optimistic and enthusiastic.

In his interviews with teachers, principals and guidance officers across the country for his story on "Our Good Teenagers," Mr. Hagerty found himself, in his own words, "excited by their excitement."

Ideas that work

Lend-lease the experts: Syosset, N. Y., schools use the best PR talent available—free of charge. Three district residents—a newspaper editor, an advertising layout expert and a public relations man—plan long-range information campaigns and advise on district publications, including releases to the local and county newspapers.

The secret ingredient: Riverside, Calif., used coffee as a secret ingredient to get money. An $18.7 million building program for schools from elementary level through the district's junior college was passed on June 9 with the aid of more than 200 "coffees" in homes. Workers also contacted homes in the district personally or by telephone during the two days immediately preceding the vote.

Libraries have more than books: Residents of the American River Junior College District of Sacramento, Calif., are taking advantage of the college's widely publicized invitation to pick up a card and make full use of the new facilities. While using the library, they also see the continuous campus exhibits featured there.

"Bread and Butter" letter to voters: The Salt Lake City, Utah, Board of Education sent citizens a leaflet reporting school building progress called "Because You Voted Yes."

If you know of "communications ideas that work" that should be reported here, please send them to the editor.

OV-239

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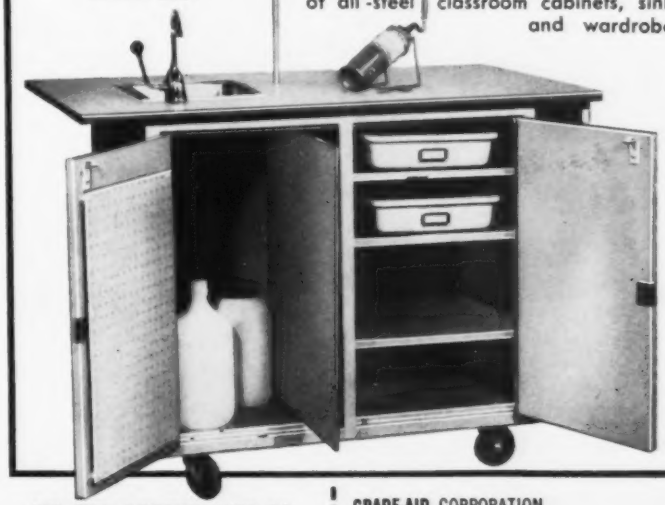

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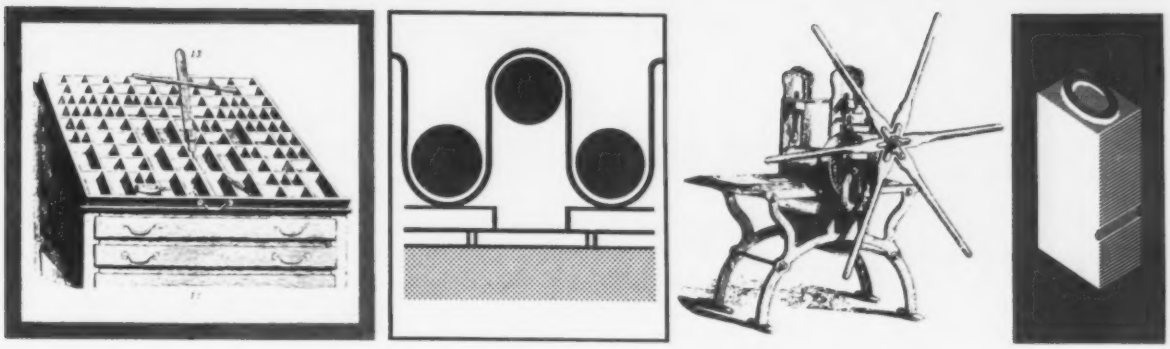

EXECUTIVE'S BOOKSHELF

THE CHILD, THE PARENT AND THE STATE

By James Bryant Conant. Cambridge, Mass.: Harvard University Press. 1959. 211 pp. $3.50.

This is a highly readable book, full of the insight possible only to one who has studied at first hand secondary education in this country and in at least two European nations. The second half of the book is given over to footnotes and documents which support clearly the calm sagacity expressed in the first hundred pages.

Mr. Conant is talking to parents and citizens and hopes that those who can do most to influence the shape of American secondary education are listening. He wastes no time on the hair-splitting controversy as to what constitutes basic education. For the purposes of this book he defines education as what goes on in schools and colleges. The event proves the utility of the definition.

The book's theme is the responsibility of citizens generally, and parents particularly, to inform themselves and to take appropriate action to guarantee that *American secondary education shall serve all American youth and the nation.*

In 100 pages there is provided enough background information on the relationship of the child, the parent and the state and on the development and purposes of American secondary education to give the concerned citizen some guidance through the maze of proposals and counter-proposals, shrill criticisms and panicky defenses that fill the post-Sputnik air.

One does not need to agree in detail with Mr. Conant's proposals to appreciate that they are reasonable and informed. Until Mr. Koerner,

James B. Conant

Mr. Fadiman and others, whose views were published (see following review) almost at the same time, have shown a comparable awareness of the whole problem and purposes of the American high school, their suggestions must seem less informed and less relevant.

Mr. Conant's overview of secondary education's history and role is useful not only to understand his proposals but to furnish a perspective for their consideration. He calls for "immediate action to improve the high schools," so that they may provide an education suitable for the times and for the national interest. He points out that such schools will cost more. He urges the elimination of too small high schools. He calls for local action, and distinguishes local problems and needs from the overall problems. He underlines the irreversible nature of the "revolutionary transformation" of the American high school since 1905. He asserts strongly the relationship between quality of education and the quality and quantity of good teachers.

He excuses no one from the responsibility of becoming informed and of taking appropriate action.

This book, designed to be read by citizens generally, is one most educators and educationists will read with profit. —A.B.S.

THE CASE FOR BASIC EDUCATION

Edited by James D. Koerner. Boston, Mass.: Little, Brown and Co. 1959. 256 pp. $4.

Misleadingly entitled, this book presents a hasty case for "basic education" and then goes on at length to prescribe the components of an educational program designed for "good

Clifton Fadiman

students" in American high schools.

The details of the prescription and the passion of the presentation vary inversely with the distance from

the introduction. Scholars advocate learning in their fields of citizenship, history and geography, English composition and literature, classical and modern languages, mathematics and sciences. After this, the rather timid claims of art, music and philosophy for any remaining crumbs of time provide a soothing interlude before a rather astonishing proposal for a speech course in the classic manner.

The final chapter by a school board member of nine years' experience shows some real understanding of the roles and goals as well as of the problems of public schools.

Mr. Koerner, in the foreword, anticipates many of the "lances" that "will be tilted at this book." He defends it against charges of utopianism, presumptuousness and vagueness, but this pre-defense will not prevent such criticisms. However, there are more serious defects.

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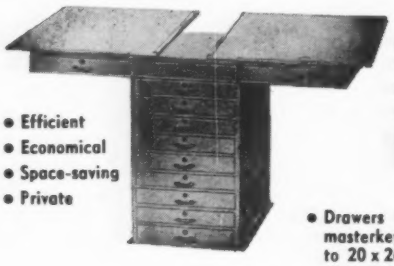

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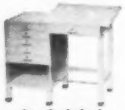
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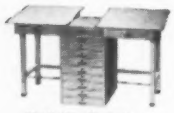
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Clifton Fadiman, showing an astonishing ignorance of what Mr. Conant has called the revolutionary transformation of the American high school and its irreversibility, presents a case for "basic education" which rests on some fascinating assertions. He recites what he was taught 40 years ago in a New York City high school and concludes that (1) it furnished him a foundation for a continuing self-education and (2) "it precluded my ever becoming lost."

The definition of basic education, which Mr. Fadiman clearly relates to the high school curriculum which made him what he is today, rests on his faith in the regenerative power of certain studies and their peculiar appropriateness to the discovery of "identity" by those taking these subjects. The case rests on faith, entirely defensible, but also on unsupported, and to this reviewer uninformed, assertions as to both his own school generation and today's.

Mr. Fadiman disregards the fact that he was among the small 10–15 percent of his generation who graduated from high school and gives no support for his assumption that his fellow graduates shared these two school-caused blessings of continuing self-education and identity.

Few would dispute the value of an education with regenerative power which builds a sense of identity in the individual, but this "case" will convince only those who will neither read nor understand Mr. Conant's analysis, or those willing to accept a generalized indictment of today's high school graduates.

The essays in the several subjects listed vary in their value, but can uniformly be recommended to high school teachers in these fields.

—A.B.S.

COLLIER'S ENCYCLOPEDIA

1959 Revised Edition. New York: P. F. Collier & Son Corp. 20 Volumes. $229. Schools and Libraries, $169.

The dictionary defines "encyclopedia" as a comprehensive summary of knowledge in which various branches or fields of learning are treated in separate articles, usually alphabetically arranged. Collier's 20-

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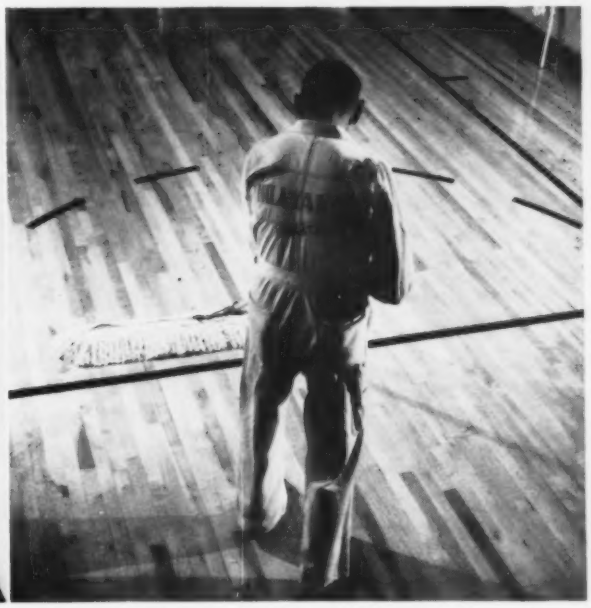

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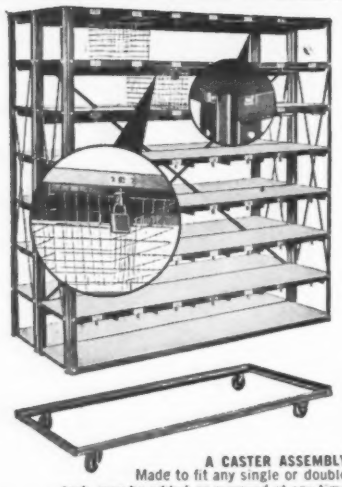

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Bookshelf (continued)

volume Encyclopedia more than meets the standards imposed by this explanation. It is a reference work that fulfills the function of informing accurately but does not attempt to influence. Controversial topics are presented impartially—each different aspect offered by experts. Articles are written by authorities in their respective areas.

There is a revised edition printed annually, as well as a yearly supplement which records current developments. An example of this is the added coverage now given to contemporary science as a result of the continuous impact of Soviet scientific developments upon the western world. New sections include guided missiles, space travel and rocket technology.

Significant new articles as well as those revised in the light of fresh material are added to the areas of social sciences, biology and medicine, country and state, humanities, physical sciences, Nobel prizes, sports and games, physical geography and American colleges and universities.

A unique characteristic, as stated by the publishers, is the 177-page bibliography. This listing is arranged by broad subject areas, presenting most available and significant books. Pertinent subheads for each category have been correlated to the indexed topical content of the encyclopedia. The bibliography is located in the last volume as a separate unit preceding the index. Extensive consultation with librarians, teachers and other professional educators prompted this arrangement.

CREATIVITY—An Examination of the Creative Process

Edited by Paul Smith. New York: Hastings House. 210 pp. $4.95.

Is creative ability a matter of inspiration alone? What is inspiration? Are there techniques for discovering creativity in the individual? Is there any training which develops it?

These are questions Chairman Paul Smith set at the Third Communications Conference of the Art Directors Club of New York. A dozen presentations on the subject

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JAMES BRYANT CONANT discusses... *What Should Be Done For Our Schools*

Enlarging upon the outline he presented in *The American High School Today*, Mr. Conant examines the relation of government to education and compares our system of education with those of Europe and Russia. He offers an analysis of educational problems in various communities, with recommendations for reform and greatly increased financial support.

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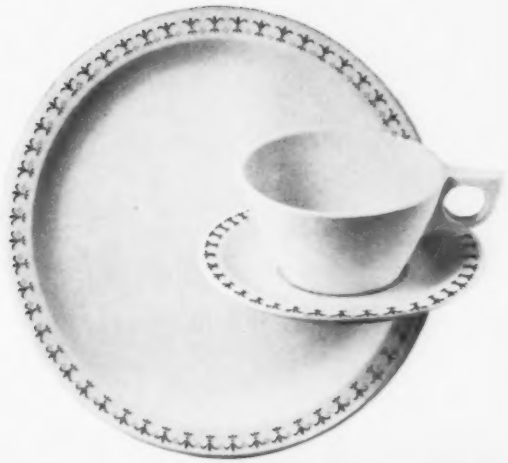

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and an anticlimatic "give-and-take discussion" are faithfully reported. Since this volume is a report on the conference and since the presentations were designed to be heard not read, the book, though handsome and readable, is uneven in content, value and style.

No answers are found to the chairman's questions, but several of the papers are illuminating and one is worth the price of the book for its analysis of the creative process.

Dr. Irving A. Taylor's paper on *The Nature of the Creative Process* is thoughtful, provocative and stimulating. He distinguishes five levels of creativity and illustrates each brilliantly. He lists four stages in the creative process and finally discusses plastic perception and plastic communication. These 30 pages are the heart of the book.

Several short papers add illumination. Professor Arnold's *Creativity in Engineering* and Editor Flanagan's *Creativity in Science,* shed new light on the subject.

As Editor Smith says, creativity is important, and we need to learn all we can about it. It often appears that rather than nurture it, our educational and value systems suppress it. We need creative thinkers and doers. This book will sharpen one's understanding of the creative process and the conditions which nurture it. —A.B.S.

INDUSTRIAL LEADERSHIP—The American Way to Teamwork

By Clarence A. Weber and John W. Karnes, Jr. Philadelphia, Pa.: Chilton Co.—Book Division. 1959. 226 pp. $5.

One of the most serious problems facing industry in an economically free nation is the training of people for positions of leadership. Certain elements of leadership are common to all areas of endeavor—education, industry and government. The authors present the thesis that a constant exchange of ideas between educator and industrialist will develop a more effective industrial democracy. After each chapter, questions are posed for discussion.

RACE RELATIONS AND AMERICAN LAW

By Jack Greenberg. New York: Columbia University Press. 1959. 481 pp. $10.

This dissertation discusses the fundamental principles upon which the American law of race relations is based, and demonstrates their success or failure in the areas of education, housing, employment, elections, the criminal law, public accommodations, interstate travel, domestic relations and the armed forces. The penetrating examination focuses attention on the most important issue of segregation-desegregation-integration.

PURCHASE GUIDE FOR PROGRAMS IN SCIENCE, MATHEMATICS, MODERN FOREIGN LANGUAGES

Prepared by Council of Chief State School Officers and Educational Facilities Laboratories, Inc. and others. Boston: Ginn and Co. 1959. 336 pp. $3.95.

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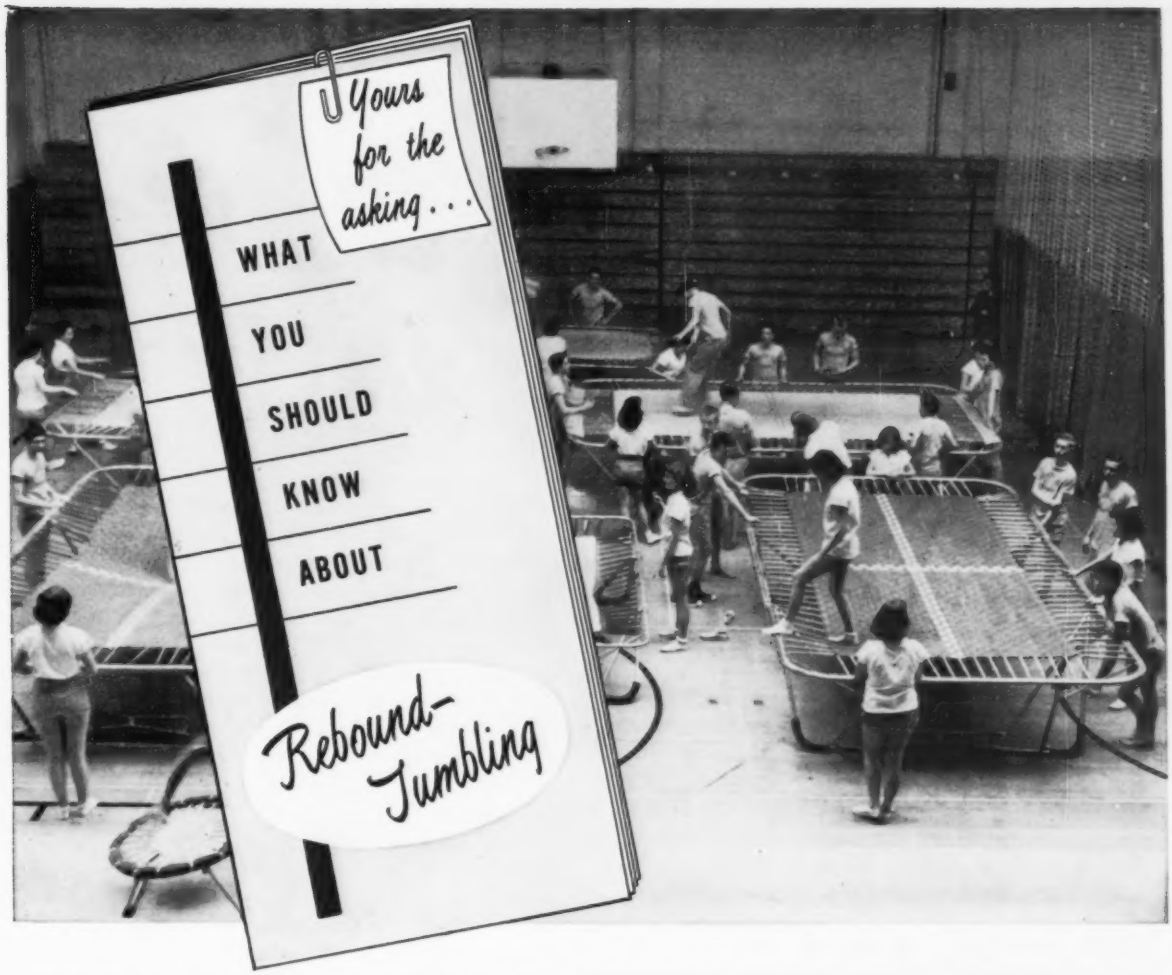

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PLANT NEWS BRIEFS

school library designed as materials center

THE LIBRARY OF North Central High School, Washington Township, Indiana was designed as a materials center, with provision for the centralized selection, ordering, cataloguing, processing and administration of all library and audio-visual materials.

The library itself includes a large reading room with a reference area and faculty lounge, a conference room and a combination work room-librarian's office. At present the library accommodates 14,000 books, with room for an additional 6,000. The faculty lounge houses professional books, pamphlets and periodicals. The conference room, which seats eight people, stores all the back issues of periodicals.

The audio-visual section of the materials center is composed of a preview room, storage and work room and three small listening rooms. The preview room, with entrances from the main corridor, library reading room and the storage room, is acoustically treated, has a wall screen and seats 18 people. It is used primarily for film and slide previews and small class showings.

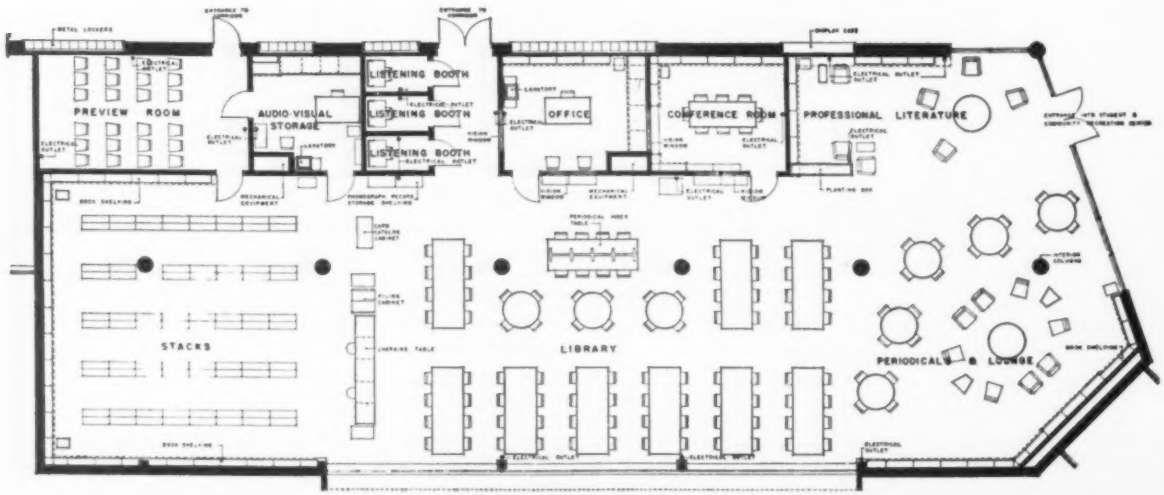
The storage-work room has shelves for supplies, records, catalogs and small equipment. There is also storage space for projectors and other large equipment such as screens and projection tables. Students are on duty to charge films and equipment to teachers, check films in and prepare them for return mailing, splice films and make minor repairs to equipment.

The three listening booths are soundproofed and equipped with tables, chairs and record players. Language and speech teachers use them for student assignments as well as for their own instruction.

Records, filmstrips, slides and transcriptions are housed in specially built wall shelving in the main library, just outside the audio-visual storage room. These materials are charged and returned at the main desk, along with books and printed materials.

Additional audio-visual facilities throughout the high school include: radio reception in all rooms through the console of the public address system; a large screen and projector in the auditorium; two audio-visual rooms for film shows, one accommodating 30 people, the other, 60; four classrooms equipped for audio-visual use; wiring throughout the school for closed circuit and outside television.

These physical facilities are what make North Central High School's library a complete and efficient materials center, according to Mary Louise Mann, head librarian, and J. Everett Light, superintendent of schools.



Above, the library of North Central High School, seen from the main lobby. Much use is made of glass walls throughout the materials center. Right, a corner of the audio-visual equipment room which is used for repair work and storage. Below, one of the three listening booths available to students and teachers. Opposite page, floor plan of the materials center which reveals the compactness and practicality of the design.

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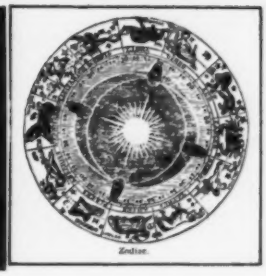

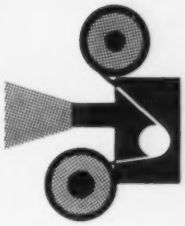

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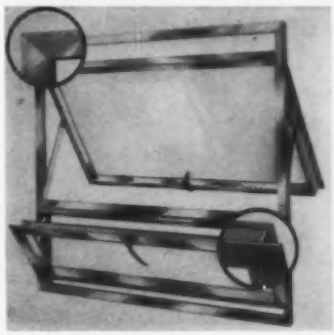

with the heliarc process which, according to the manufacturer, gives 100 per cent protection from atmospheric "pollution." Manufactured by:

PETERSON WINDOW CORPORATION, 734 Livernois Ave., Ferndale 20, Mich.

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Anything printed or written up to 9¼ in. wide by any length, including colors and ball point pen, may be duplicated with the "Porta-Fax" photo copier. Machine processes and prints 60 to 120 copies per hour. It

weighs 15 pounds, measures 18 × 6 × 10 inches, and is equipped with a carrying handle. Copier, priced at $149., operates on 115 volts AC.

GENERAL PHOTO PRODUCTS CO., INC., Chatham, N. J.

OV-248

VIEWLEX PROJECTORS are used in over 100,000 Schools

Easier to Learn With...

Easier to Teach With...

The Viewlex V-25-P Combination 35mm Filmstrip and 2" x 2" Slide Projector

The progressive Viewlex V-25-P, 500 watt Projector moves A.V. TEACHING POWER years ahead—in a single giant stride! Gives you: Light multiplier optical system for brighter images; revolutionary "pop-up" lamp ejector for easy changing; Venturi-style lamphousing and Airjector opening for super cooling; simple push-in filmstrip threading; automatic take-up accessory. **$92.50**

V-45-P (Same as V-25-P – except for filmstrip only) **$79.50**

MULTI FOCAL ACCESSORY LENS
Infinitely adjustable 3½" to 6" focal length lens produces full screen image at any distance without moving or re-focusing projector. **$49.50**

Other Viewlex projectors available from $50.25 to $495.00. Ask your Viewlex Audio-Visual franchised dealer for a demonstration, or write for catalog.

All Viewlex projectors are GUARANTEED FOR A LIFETIME.

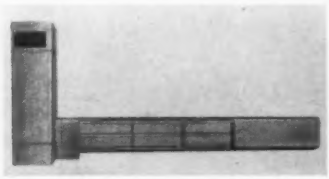
Viewlex INC.

35-07 Queens Boulevard, Long Island City 1, N. Y.

World's Largest Exclusive Manufacturer of Slide & Filmstrip Projectors

HEATING AND VENTILATING **OV-306**

New self-contained, individual room heating and ventilating system includes perimeter-type, draft-free,



air distribution. System utilizes a Janitrol counter flow gas-fired conditioner, which is enclosed in a floor-to-ceiling metal cabinet. Wall duct sections that are attached to exposed walls, and discharge the conditioned air in a draft-free vertical pattern are included. Duct sections, which hang from the wall, may provide extra storage space by including matching shelf sections. Enclosure cabinet is fire resistant, and is finished in mar-resistant beige baked enamel. Unit is approved for all types of gases, including L. P. Available from:

JANITROL HEATING AND AIR CONDITIONING DIV., Columbus 16, Ohio.

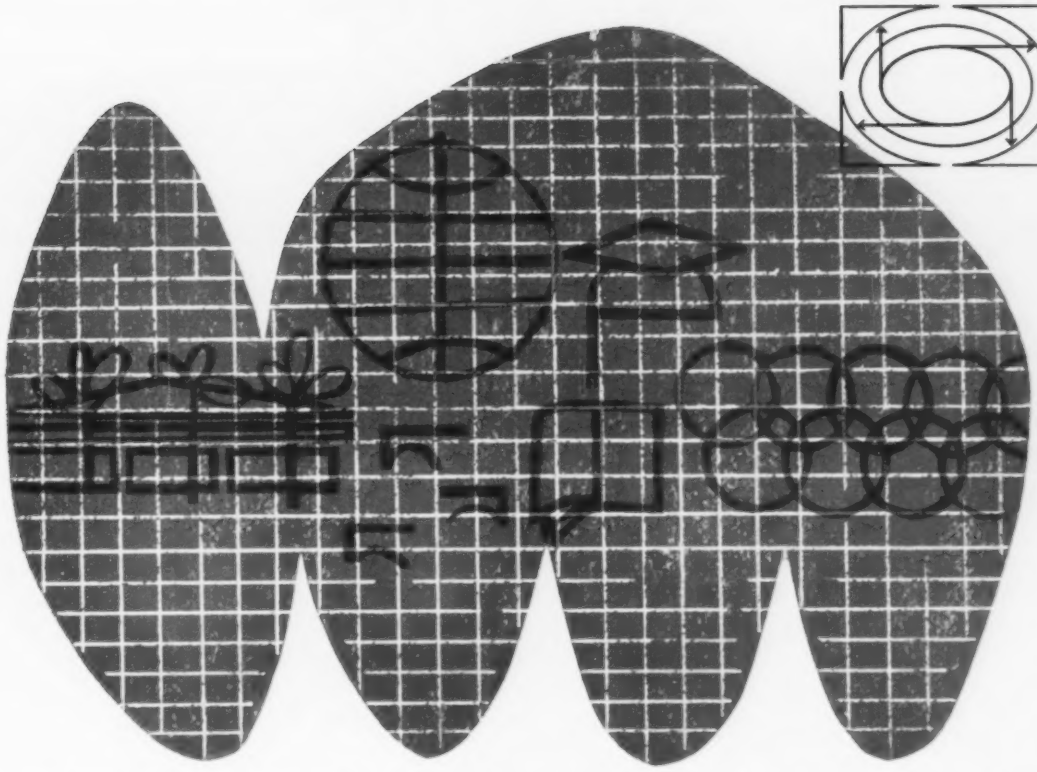
SNOWTHROWER **OV-307**

A 3 h.p., 4-cycle Briggs & Stratton engine powers this snowthrower

which is said to remove up to 520 shovelsful of snow a minute. Machine, priced at $239., clears a 20-in. path through any depth or consistency of snow without clogging or stalling. Thrown snow is spread over 30 ft. to eliminate high banks. Throwing angle is adjustable. Unit moves on 16-in. solid rubber cleated wheels, and working parts are shielded by a wrap-around hood. Available from:

JARI PRODUCTS, INC., 2938 Pillsbury Ave., S., Minneapolis 8, Minn.

OVERVIEW



a stimulus to creative action for educational executives

Stimulus

Overview is the new and different monthly magazine in education.
It holds the promise of a new and different reading experience for you...
for Overview is the first in this field to be concerned continuously with the creative developments throughout the big and busy world of education. Here are the three methods Overview's distinguished editors will use to provoke your own thinking: 1 In every dynamic issue of Overview you sit in on a lively seminar that's international in scope. Subjects might range from architecture to population patterns to closed circuit television. Opinions may come from the school system administrator, the training director, the university dean. From month to month this unique editorial approach — the exciting exchange of ideas from every corner of the educational world — will bring you a different perspective on your own problems. We call that perspective — the overview. 2 Each article in Overview, taken by itself, will meet this demanding criterion: "Is the subject of this article meaningful for all educational executives... will it interest, stimulate or provoke ?" Every essay, every forum-in-print, every monograph and descriptive article will be predicated on an idea or the germ of an idea which has broad applications. We call this technique — the overview. 3 Since Overview will be read and used by working educational executives, it will include suggested solutions to problems you are facing today or are likely to face tomorrow. But again, the difference here is Overview's point of view: "Is this the imaginative way of solving this problem... will this solution germinate some new thinking in this area?" Ideas are presented clearly and crisply, communicated as a fresh injection of new answers. We call this kind of injection — the overview.
In these three ways will Overview be a stimulus to creative action for all educational executives.

OVERVIEW A BUTTENHEIM PUBLICATION • 470 PARK AVENUE SOUTH • NEW YORK 16, NEW YORK

OV-296

No wasted wall space . . .

with **R-W** CLASSROOM WARDROBES

With today's high construction costs and crowded classroom situations it is imperative that all available wall space be used to good advantage. The best way to provide adequate display or work area for all students is to specify wardrobes equipped with either Cork Boards or Chalk Boards . . . R-W Wardrobes, of course. R-W Classroom Wardrobes are available in a wide range of types, door openings, and of wood or steel to meet your exact requirements . . . all combine adaptable flexibility, and modern styling. Ruggedly constructed to provide years of efficient service and dependable operation. For top dollar value at the time of installation and over the years to come, you can't beat R-W "multiple-use" Wardrobes. Installation supervised and guaranteed.

- **R-W "multiple-use" Wardrobes available with Cork Bulletin Boards or Chalk Boards and Chalk Rails.**
- **Permits maximum use of all available wall space . . . the modern way to provide ample work area for all students.**
- **Cork Boards and Chalk Boards available in various colors to perfectly compliment the wardrobe units and surrounding interior decoration.**
- **R-W offers a line of wardrobes with a type and style to meet your exact specifications . . . all are available with or without Cork Boards or Chalk Boards as desired.**

WRITE, WIRE OR TELEPHONE FOR COMPLETE INFORMATION

NOTE . . . R-W also manufactures a complete line of sound insulated folding partitions for gymnasiums, auditoriums and classrooms. Write today for complete information.

Richards-Wilcox
MANUFACTURING COMPANY
"SCHOOL EQUIPMENT DIVISION"

526 W. THIRD STREET, AURORA, ILL. • Branches in Principal Cities

NOTEBOOK INDEX SYSTEM OV-311

Set of five divider pages for loose

leaf notebook indexing features a different colored plastic tab on each divider for identification insert. In addition, ring-binder holes are reinforced with an acetate strength-product, "Duratest." This, according to the manufacturer, will allow dividers and their accompanying pages to remain indefinitely in ordinary ring binder notebooks. Marketed by:

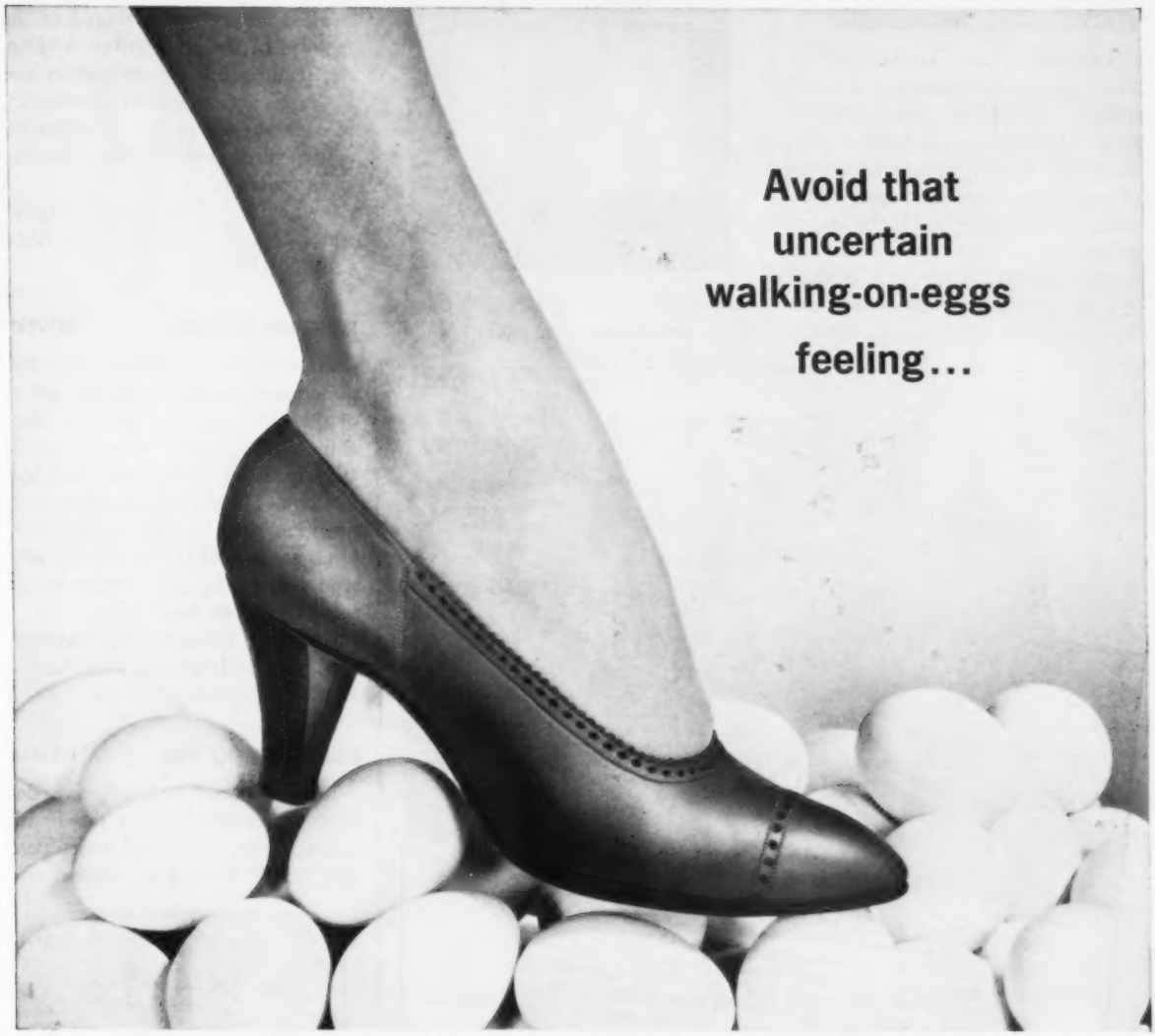
EZYINDEX PRODUCTS CORPORATION, 153–13 Northern Blvd., Flushing, N. Y.

PORTABLE COLLATOR OV-312

Employing a "new principle in manual paper gathering techniques," portable collator enables a person to

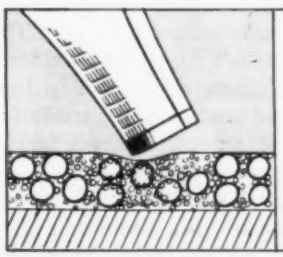
assemble 6,000 pages per hour including time to jog and set sheets aside, according to the manufacturer. Unit, designed to fit conveniently atop a desk corner, has twelve stations each capable of holding up to 300 sheets of 20-lb. paper in sizes up to 17×11 in. It is priced at $37.50, and is available from:

A. P. HEINZ COMPANY, 2422 Lunt Ave., Chicago 45, Ill.



For positive traction underfoot, plus lasting beauty, use floor wax containing LUDOX—Du Pont's anti-slip ingredient

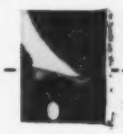
With "Ludox" in the floor wax you get added safety underfoot. "Ludox" acts like a brake that promotes easy, effortless walking. And you get the lasting beauty only a fine wax can give your floors. Scratches and scuffs can be buffed out without rewaxing. For more information and a list of suppliers, write us or mail coupon below.



In floor wax, microscopically small spheres of "Ludox" colloidal silica are mixed among larger wax globules. Under foot pressure the particles of "Ludox" bite into the softer wax globules, resulting in a snubbing action that makes walking more carefree and comfortable.

DU PONT LUDOX® colloidal silica

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY



E. I. du Pont de Nemours & Co. (Inc.)
Industrial and Biochemicals Dept.
Room 2533-O, Nemours Bldg.
Wilmington 98, Delaware.

Please send me FREE booklet describing the advantages of using floor wax with "Ludox" and a list of suppliers of these quality waxes.

*Name*_____

*Firm*_____ *Title*_____

*Address*_____

*City*_____ *State*_____

OV-308

PLASTIC LAMINATING MACHINE

Desk-top, plastic laminating machine weighs 31 pounds, and stands 15 in. high by 18 in. wide by 10½ in. deep. Machine fuses a layer of pliable plastic film to one or both sides of an original document up to 11 in. wide, and any length. Operation requires about nine seconds for an average letter-size paper, and costs 2½ cents per side. Suggested uses for the unit, the Apeco Ply-On

Laminator, include: laminating bulletins and blackboard notices of all kinds, newspaper clippings, and printed articles to be routed to the faculty. In the administrative office, the manufacturer suggests, uses can be extended to school directories, records, student passes, identification cards, etc. Priced at $295., machine is a product of:

American Photocopy Equipment Co., 1920 W. Peterson Ave., Chicago, Ill.

PUNCHING MACHINE OV-309

Hand-operated punching machine punches rectangular holes for metal or plastic loose-leaf binding. Machine weighs twenty pounds, and is 16½ in. long, 12 in. wide, and 5¼ in. high. Heralded as a "low cost, precision" unit by the manufacturer, it has a standard 19-ring setting, new type side guide, and automatic die return. Offered by:

General Binding Corporation, 1101 Skokie Highway, Northbrook, Ill.

RUBBER CEMENT PEN OV-310

Recently developed adhesive device, fits comfortably in the hand, and operates like a ball point pen. The "DOT Gum Pen" releases one

dot of rubber cement whenever its ball point is depressed. One filling is sufficient for around 5,000 dots. The adhesive itself may be removed from any surface merely by rubbing. Pen, filled and ready for use, retails for about 98 cents. Refills sell for 49 cents apiece. A product of:

Devon Tape Corporation, 110 Hartford Ave., Mt. Vernon, N. Y.

OV-250

ANOTHER L. E. CARPENTER ORIGINAL VICRTEX INSTALLATION

Practical, durable safety cushions can be made of plywood panels padded with cellulose rubber and rubberized hair, and covered with fire-resistant Vicrtex VEF Vinyl Fabric. These easy-to-maintain panels protect both children and walls. In addition, such cushions are a factor in helping to dampen noise in large gyms.

GYMNASIUM • UNION FREE SCHOOL, DISTRICT 10, MINEOLA, N.Y.

all these ideas

and many more — are yours for the asking. For this helpful guide book for planning better school wall surfaces with

VICRTEX V.E.F.*

VINYL WALLCOVERING FABRICS

write today to:

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*vinyl electronically fused

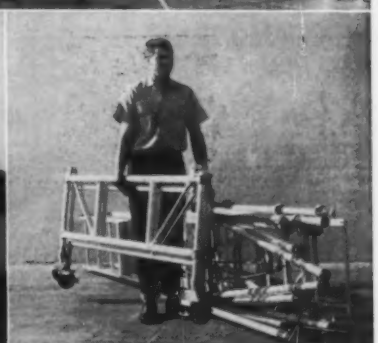
OV-251

UP-RIGHT ANNOUNCES A NEW WORK PLATFORM

TALLESCOPE

...telescoping aluminum structure for overhead spot maintenance

Lightweight, rapidly assembled by one man. Extends instantly for reaching heights up to 30 ft. Telescopes for rolling under trusses and other obstacles. Adjustable legs for uneven floors or stairways.



Rolls through doorways . . . only 29" wide, telescopes and folds down.

Bridges over auditorium seats.

Separates easily into 3 components for convenient storage or transportation.

FOR TALLESCOPE CIRCULAR WRITE TO UP-RIGHT SCAFFOLDS

UP-RIGHT SCAFFOLDS • DEPT. 172 • 1013 PARDEE ST., BERKELEY, CALIF

MANUFACTURED BY UP-RIGHT SCAFFOLDS

OV-252

BRILLO FLOOR PADS

for every job from stripping to buffing . . .

give you . . .

- precise uniformity
- top efficiency
- economy

WHETHER it's stripping old layers of wax or adding the final touch to a highly polished floor, there's a Brillo Solid Disc Steel Wool Floor Pad specially engineered to do a perfect job.

The steel-wool fibres in every Brillo Floor Pad are held to a strict uniform quality. These fibres are cross-stranded for superior abrasive action, enabling your machine to do a faster cleaning job . . . you save money, too.

From a heavy duty #3 to fine #0, there's a Brillo Floor Pad for every floor maintenance job . . . stripping, cleaning, waxing, polishing, buffing. Write today for free leaflet on Better Floor Maintenance.

BRILLO MFG. CO., INC.
60 John St., Brooklyn 1, New York

OV-253

NOW!
POSTURE SEATING FOR
SCHOOL USE!

- Standard School Colors
- Instantly Adjustable
- Tubular Design

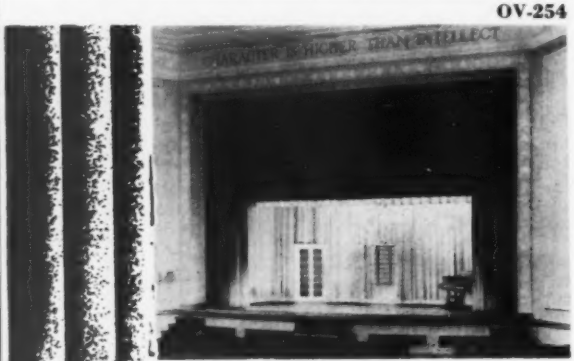
No. 114 School Posture Chair

Here's the answer to a crying need for typing class seating—an inexpensive posture chair with all the adjustments of those used in business. Because the height adjusts instantiously from 14" to 20"; and the seat pivots on a lifetime swivel, there are no slow-downs while the class prepares for work. The back adjusts up and down, in and out. Yes, the 114 is comfortable, yet built to "take it!"

Productive School Seating
DESIGNED TO STAND ABUSE!

DEPENDABLE MFG. CO.
2407 Fort Crook Road, Bellevue, Nebraska

OV-254



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VERSATILE, ECONOMICAL, DRAMATIC

Consult Pittsburgh

Let us design a modern, dramatic stage setting that can be quickly and easily adapted to your every need.

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Our Curved Cyclorama Track converts your stage to any size area you need — or clears the stage for use as a gymnasium.

WRITE TODAY *for free consultation or additional information.*

Pittsburgh Stage Inc.

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PRODUCT LITERATURE

Architectural

A new **"Specification Manual"** for Northern hard maple, beech, and birch flooring is now available through the Maple Flooring Manufacturers Ass'n., 35 East Wacker Drive, Chicago 1, Ill. Text includes information on the physical characteristics of the species used in flooring manufacture, thickness and face widths available, uses of the different grades, table to ascertain quality of flooring required, and official rules governing reinspection of flooring. **OV-401**

Armstrong Cork Company, Lancaster, Pa., has published a 12-page color booklet explaining how its new fire protective **acoustical ceiling tile** is designed to save time and money in non-residential construction. Booklet contains case histories, as well as detailed descriptions of three different Fire Guard installation sytsems. **OV-402**

Descriptions, specifications, and capacities of **incinerator systems** are to be found in 16-page illustrated brochure released by Brule (Brulay) Incinerators, 13920 South Western, Blue Island, Ill. Details on 2¾ to 40 bushel commercial packaged, masonry built, and steel shell type incinerators, as well as school selection guide sheet, are contained in the publication. **OV-403**

Complete line of automatic control systems for hot water, steam, gas-fired, and electric unit ventilators is described in detail in new **"Unit Ventilator Control Application"** manual released by Barber-Colman Company, 1300 Rock Street, Department 763, Rockford, Ill. Actual control applications are shown on each page, covering all makes and models marketed by major unit ventilator companies. **OV-404**

Maintenance

Reference guide to modern and efficient techniques for **building maintenance** has been published by Dept. MM, Service Products Division, Johnson's Wax, Racine, Wis. The 12 sections of the 27-page manual include such things as: step-by-step procedure for cleaning floors, day-to-day floor maintenance, stain removal, and safety ideas. **OV-405**

Green Label line of **floor washing equipment** is described in new catalog put out by the Market Forge Company, Janitorial Equipment Division, Everett 49, Mass. Featured are galvanized or stainless steel buckets graduated in gallons for simplified measurement of all floor cleaning solutions. **OV-406**

Audio-Visual

"1960 Educational Motion Pictures Catalog" has been released by Indiana University's Audio-Visual Center, Bloomington, Ind. The 664-page publication describes some 6,000 films of cultural, social, and educational value in the University film library that are available on a rental basis. **OV-407**

OV-255

Blooming Prairie Jr.-Sr. High School, Blooming Prairie, Minn. Archt: Haarstick, Lundgren & Assoc., Inc., St. Paul, Minn. Photographer: Clark Dean, Infinity, Inc., Minneapolis, Minn.

SLATE CHALKBOARDS

first choice in leading schools

FOR EASIEST READING . . . WRITING . . . CLEANING

The growing number of award winning schools using slate chalkboards confirms slate's

. . . superior visibility

. . . unsurpassed writing and erasing qualities

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. . . lowest cost per year

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Write for free literature on slate chalkboards. You'll find them invaluable in choosing the proper chalkboard for your school.

500 million years in the making . . . . . NATURAL SLATE

PENNSYLVANIA SLATE PRODUCERS GUILD, INC.

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Sponsored by producers of Pyramid and Keystone American natural slate chalkboards

AO's New Opaque Delineascope

Brighter...Lighter...

...more convenient

BRIGHTER AO's New High-Speed Opaque Delineascope projects a brighter image than any other opaque projector you can buy...a full 145 lumen output. Screen illumination is uniform from edge to edge and definition is sharp from corner to corner.

Only American Optical uses all-glass reflecting surfaces to provide maximum illumination intensity. Glass reflectors will not tarnish or deteriorate...will not scratch with cleaning. Your AO Opaque will still produce the brightest screen image, even after years of service.

LIGHTER AO's New Opaque Delineascope is easily portable...weighs just 29 pounds. Copy platform is extra deep... plenty of room for material up to 2½ inches thick. Elevation locking device positions platform instantly at any desired level.

MORE CONVENIENT Adjustments for focus, optical pointer, switch and roll feed are all controlled quickly and conveniently from the right side of instrument...where they belong.

Ask your AO Sales Representative for a convincing demonstration or write...

American Optical Company
SPENCER
INSTRUMENT DIVISION, BUFFALO 15, NEW YORK

Dept. A-71
☐ Please send full information on AO's New Opaque Delineascope.
☐ Please have my AO Sales Representative set up a demonstration.

Name_____
Address_____
City_____ Zone____ State____

IN CANADA write — American Optical Company Canada Ltd., Box 40, Terminal A, Toronto, Ontario

TEACHING DEVICES

With Christmas just barely behind us, we find it slightly difficult to make the transition from mulled wine and mistletoe to mop pails, maps and modular partitions—all so necessary in equipping a school—but a trifle mundane in contrast to the tinsel of the season just past. But there's nothing like the start of the New Year to get one down to brass buckets!

And speaking about maps, we were rather fascinated by the new

raised relief plastic map of the United States and Mexico, (OV-501) produced by the John H. Andrews Co. of 1676 N. Magnolia, El Cajon, Calif. Priced the same as conventional framed flat maps, this colorful map with its elevated mountains, uplifted shore lines, and indented rivers permits topographic features to be felt as well as seen. The map is a handsome affair done in seven colors and with lettering bold enough to be easily read from a distance.

During the past 20 years, the plastics industry has grown amazingly until our economy, in fact,

seems to be entering a new "plastics age." In spite of this, there has been an almost total lack of plastics ex-

perimental materials for educational use below the college level. This gap in the science curricula can now be filled with a kit called the **Poly-Ep Experimental Kit,** (OV-502) designed by D. J. Peterson Co. of Sheboygan, Wis. The kit contains all the materials, apparatus and instructions for performing five basic experiments in plastics. The special resins used are completly safe and non-toxic.

Budding architects should see The American Institute of Architects' new 16mm film, **Designing a Better Tomorrow** (OV-503), which explains the attitudes, interests and educational preparation desirable for the study of architecture as a career. Primarily intended for students in high schools, the film is also considered suitable for adult audiences such as P-TA, civic and business groups. It can either be rented or purchased from The American Institute of Architects, 1735 New York Ave., N.W., Washington 6, D. C.

In the not too distant future, the "ideal teacher" may very possibly be a machine, nimble and effective, if not quite tender. Second and sixth graders, in experimental groups already taught by machines, have learned their lessons at least as well as conventionally-taught children, and what's more, without cheating. Details of this experiment are given in a new book called **"Automatic Teaching"** (OV-504), edited by Eugene Galanter of the University of Pennsylvania (John Wiley & Sons, Inc., 440 Fourth Ave., New York 16, N. Y. 198 pages, $3.25). Twenty contributors sum up our present knowledge on this interesting subject.

A "jack-of-all-trades" sort of tool for the machine shop has been developed by the Wilton Tool Mfg. Co., Inc., Schiller Park, Ill. Called the **Wilton Universal Turret Vise for General School Shops** (OV-505), this vise is suitable for use in woodworking, metalworking, electrical, sheet metalworking and craft courses.

OV-257

they all agree

ATHLETE'S FOOT is a MENACE

. . . and they all agree too, that SANI-MIST is the *only* practical and effective way to FIGHT ATHLETE'S FOOT in the shower room.
This modern, trouble-free method has found wide acceptance in the shower rooms of big industrial plants, up-to-date schools and country clubs. Our files are full of convincing testimonials* . . . proof that SANI-MIST is *today's way* to FIGHT ATHLETE'S FOOT with a minimum of maintenance.
You owe it to yourself . . . and to everyone who uses your shower rooms . . . to get the full story on this effective, attractive and economical SANI-MIST method. Write today for FREE sample and complete details.

SANI-MIST is Safe, Sanitary, Personal.

* names on request

SANI-MIST INC.
3018 Market Street,
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OV-258

Paul Anderson, U. S. Olympic Heavyweight Champion

world's champion weight lifter breaks record standing on the world's strongest

all-steel folding chair

Strength: electrically welded tubular steel. **Comfort:** contoured seats and backrests. **Easy Folding:** legs *glide* open. **Safety:** hinges can't pinch fingers. **Style:** your choice of 11 new colors in snag-free, chip and rust-resistant baked enamel.

now at a new low price

Samsonite *folding chairs*

Find it Fast in The Yellow Pages

For church, school, club, other group seating information, see Yellow Pages or write: Shwayder Bros., Institutional Seating Div., Dept. OV-10, Detroit 29, Mich.

OV-259

Schooline®
WARDROBE SYSTEMS

Fixed columns
•
adjustable
shelves

Adjustable
Height
WALLMOUNTS

Solve the pupil wraps problem efficiently with Wallmount Coat and Hat Racks. Mount on any available wall space. Hat shelves and hanger bar adjustable on permanently attached columns to height for any age group. Double hat shelves and double row of spaced coat hooks accommodate 6 pupils per running foot. Basic 3' 2" or 4' 2" units interlock to make continuous racks to fit any space or capacity requirements.

Chalkrobe
—combination wardrobe racks and chalkboard

Same as above . . . mounted on floor stand with Chalk Board or Cork Board and off-the-floor rack for overshoes. Each unit 4'2" in length.

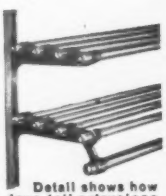
Nos. B-3 & B-4 Wallmount Overshoe racks . . . 3'2" & 4'2" lengths can interlock.

Corkrobe
—combination wardrobe rack and corkboard

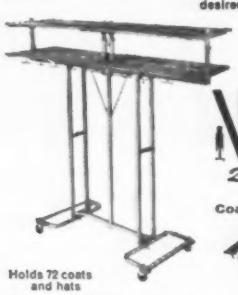
CUSTOM-LINE

Aluminum
Coat and Hat Racks

Tailored to fit any given open or closeted wall area. Smart in design and modern in "clear", "gold" deep etched anodized finishes and combinations. Quality built—closed-end aluminum tubing, rigidly held in cast aluminum brackets that are adjustable for height in dovetailed mounting extrusions. Brackets also adjustable to any desired centers.



Detail shows how dove-tail extrusions (which mount on any centers) hold brackets at any desired height.



Holds 72 coats and hats

Veep
Quick Folding
PORTABLE
Coat and Hat Racks

Sets up with a sweep of the arms . . . in 2 or 3 seconds. .

Wheels through ordinary doorways. 4' x 8' area stores racks for 720 people.

Wheels as readily as a small service cart. The Veep rack unfolds into a rigid 6' 6" long unit holding 72 coats and hats. Scientifically counterbalanced so that it can be set up literally in seconds and fold down for storage as easily as an umbrella. Built of square tubular steel with double hat shelves of closed-end aluminum tubes supported by cast aluminum brackets. Plated to assure permanent beauty. Quality in engineering, construction and finish. The most efficient equipment yet developed for dining and meeting rooms, stand-by equipment, etc. . . . for wherever the "load" varies.

Write for Complete Catalog #51

Rt. 83 and Madison St. • Elmhurst, Ill.

CLOSE-UPS

personalities

behind the headlines

Clifford M. Hardin

THE NEW PRESIDENT of the American Association of Land Grant Colleges and State Universities, Chancellor Clifford M. Hardin of the University of Nebraska, describes himself as a "farm boy who made good."

That he is a "farm boy" can easily be seen by taking a look at his early

life. Hardin is the son of Indiana Quaker parents, he was an active 4-H Club member for eight years during his youth, and he won a Club scholarship to Purdue University where he received his undergraduate degree in agriculture in 1937.

That he has "made good" is equally evident from his accomplishments. At 44, he is believed to be the youngest president ever to head the Land Grant Association. He is also chairman of the Association's centennial steering committee.

In addition to his undergraduate degree, he has done advanced work at the University of Chicago and holds a Ph. D. degree from Purdue. He has also received honorary doctorates from Purdue and Creighton Universities.

Before coming to Nebraska five and a half years ago, he served on the faculty at the University of Wisconsin and was dean of the College of Agriculture at Michigan State University.

One of the things he is proudest of at Nebraska is the new Center for Continuing Education made possible by a $1.5 million grant from the Kellogg Foundation and another $1.25 million raised in contributions from residents of Nebraska and alumni of the University.

In reflecting upon his new position, he said he believed it was the nation's responsibility to keep college doors open to all students who feel they want a higher education. Dr. Hardin intends to devote his full efforts, both through the Association and through personal work at the University of Nebraska, to achieve this ideal.

Ira Jarrell

"A DYNAMIC, extremely talented person with an indomitable spirit and boundless energy." That's the way those who know her describe Ira Jarrell, superintendent of Atlanta, Georgia, public schools who will retire this July after more than 16 years of service.

Dr. Jarrell, the only woman superintendent in a city of more than 200,000 population, has been hailed as having done an outstanding job as chief executive of one of the country's largest independent school systems.

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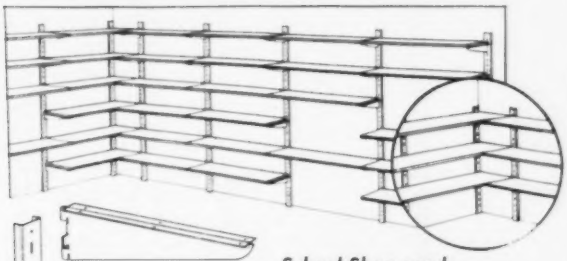

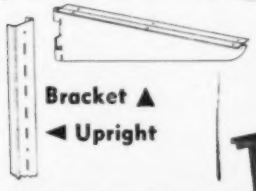

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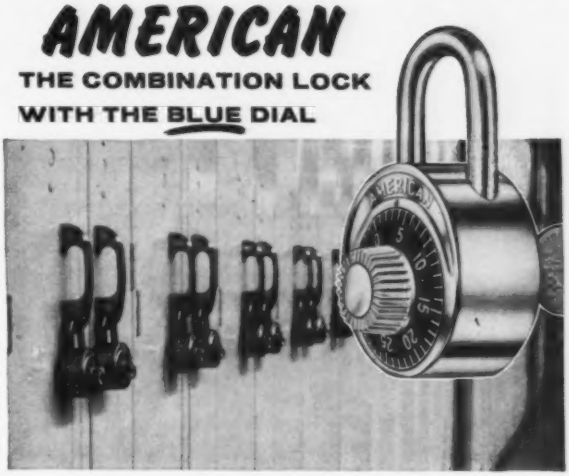

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of the public schools of the system she now directs. Dr. Jarrell is a graduate of Atlanta's Girls High School and the Atlanta Normal Training School. She earned her Bachelor's and Master's degrees from Oglethorpe University in Atlanta, and was awarded an honorary Doctor of Education degree by the University in 1950.

She began her career by teaching in Atlanta elementary schools and served as principal of two elementary schools in the city before being named superintendent in 1944.

Atlanta schools have progressed substantially under her leadership. In physical growth alone, more than $39.4 million was spent for new buildings since 1946. The greatest growth in a single year came in 1951 with the "Plan for Improvement" which annexed 39 schools from neighboring Fulton County into the city system. This annexation brought 18,000 more students and 600 additional teachers into Atlanta.

Under Dr. Jarrell, the system has grown from four non-coeducational centralized high schools to 20 co-ed community high schools. The school administration has been decentralized with a deputy superintendent, four assistant superintendents, and five area superintendents. Curriculum revision and constant re-evaluation have kept Atlanta schools in the educational forefront.

Through Dr. Jarrell's determined efforts, the Atlanta board of education now owns and operates it own radio and television stations. Having recognized the potential of these educational media, she sold the idea to the board and to the foundations which provided the initial funds.

In recognition of her service, Dr. Jarrell has twice been named Atlanta's Woman of the Year.

Dr. Jarrell is also prominent in civic and religious affairs in Atlanta and Georgia. She serves on the board of directors of countless organizations, as varied in scope as her interests—but all with the central purpose of service to mankind, especially children and youth.

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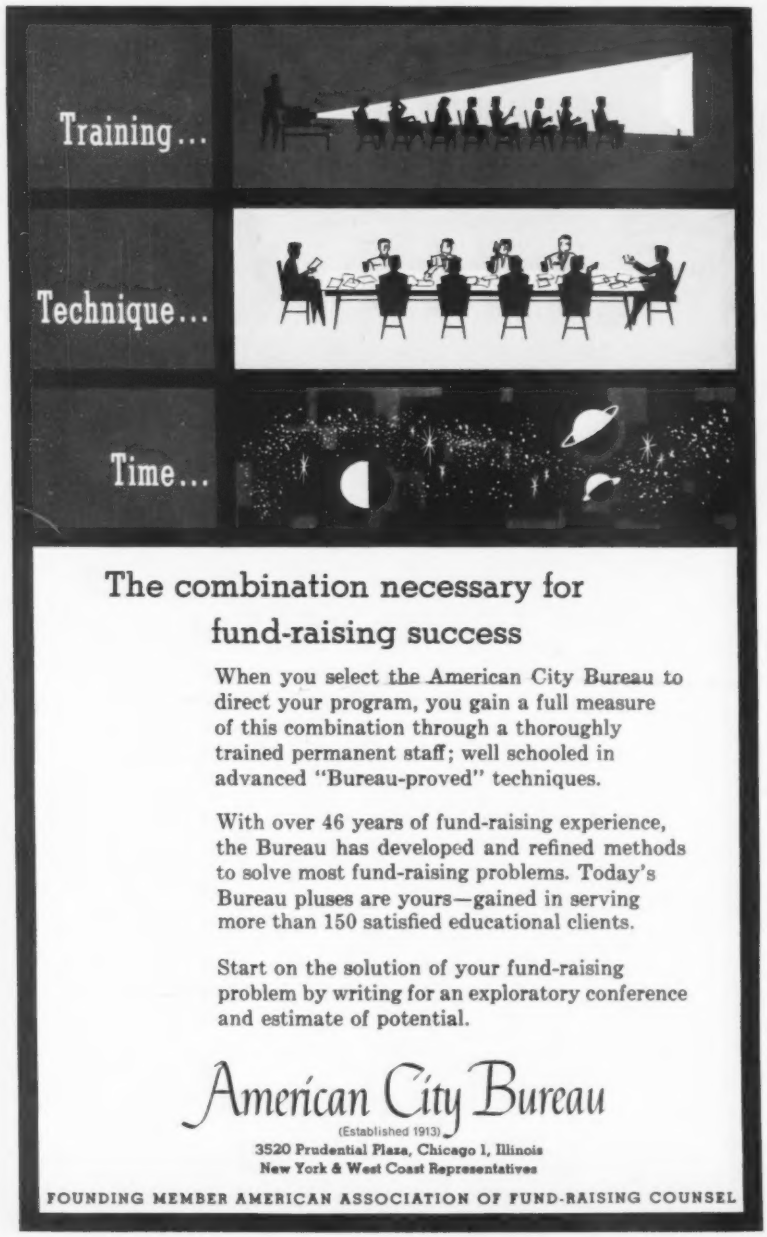
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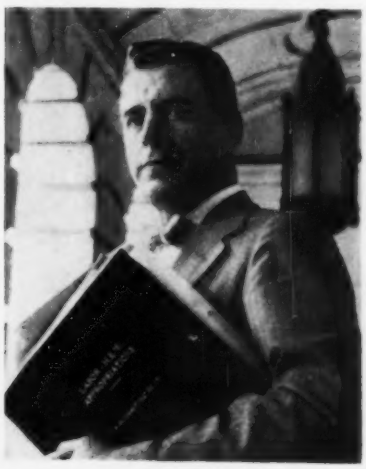
John E. Fogarty

When Congress reconvenes this month, a mild-mannered representative from Rhode Island will be sitting in one of the hottest seats in the

House. His name: John E. Fogarty, Democrat from the state's second Congressional district.

The reason for this dubious distinction: Fogarty chairs the House Appropriations Sub-committee on



Labor, Health, Welfare, and Education. And that's the committee which controls the purse strings on all legislation introduced in any of the four fields.

In such a position, Fogarty is caught squarely between fellow Congressmen anxious to enact legislation which calls for appropriations, and those, on the other hand, who are equally anxious to impress their constituents back home with their desire for economy and reduced spending. The importance of Fogarty's committee becomes apparent when one realizes that even after Congress approves a law, it is up to this committee to appropriate the necessary funds to put it into operation. "After all," chides Fogarty, "what good is a measure if the money isn't there to spend?"

The 46-year-old Fogarty hails from Harmony, R. I., a small village of less than 500 population, and still maintains an office there. He was elected to Congress for the first time in 1940 and has received the voters' confidence in ten succeeding elections. He became chairman of the Appropriations Sub-Committee in 1947 for the first time and has held the post ever since, except for the time that Republicans won control of Congress.

Before his election to Congress, Fogarty had been a bricklayer and was president of his local bricklayer's union. His political activities date back to before he was old enough to vote. When he was 20 years old, he was serving as Harmony's Democratic town chairman.

As a Congressman, Fogarty has been most active in health and medical legislation. He has been referred to as a champion of public health because of his activities.

His awareness of education's needs is shown by a proposal he introduced in 1956, before the current sputnik scare had even been anticipated. At that time, he suggested that the government establish a number of scholarships and fellowships for science students to fill a gap in the country's educational system. For the coming session, he says it's too early to make any predictions about the outcome of legislation affecting education.

Fogarty is married and the father of an 11-year-old daughter.

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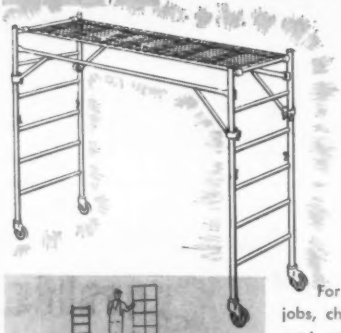

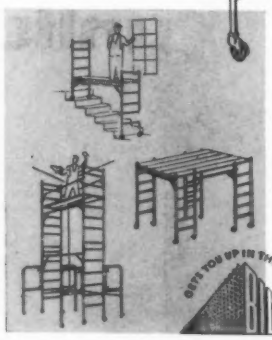

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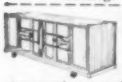

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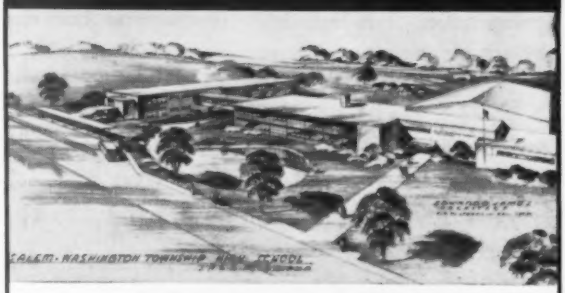

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NEWS ROUND-UP

JANUARY 1960 VOL. 1, NO. 1

Convertible School Buildings Studied in New York City

NEW YORK CITY—A study into the feasibility of school buildings which might be converted to industrial or commercial use at the end of their educational service is being undertaken by this city's board of education. Aided by a grant from the Educational Facilities Laboratories, the study will also look into the use of mobile classroom units which could be moved to meet emergency conditions of overcrowding.

In addition, the project will tackle four other problems:

- Designing schools to compensate for lack of adequate playground areas.
- How the design of large-scale housing projects might provide space for the school needs of small children.
- Designing school buildings integrally with space for commercial firms to facilitate the coordination of on-the-job training in work-study programs.
- Designing needed instructional equipment to increase the possibilities for the multiple use of space.

Land Grant Colleges:

Federal Aid Sought to Keep College Doors Open to All

ST. LOUIS—"An immediate program of federal grants" to help pay for construction of urgently needed academic facilities has been called for by representatives of some of the nation's biggest public colleges and universities.

Following two days of discussion by presidents and other top administrative officers, the American Association of Land Grant Colleges and State Universities adopted a resolution recommending the federal assistance.

Sentiment seemed to be all in favor of the resolution. At a special press conference, presidents of eight universities agreed that the Federal Government, not students or their parents, should foot a bigger share of the cost of higher education. And in contrast to last year's meeting, there appeared to be greater agreement that the increased federal support should go to both publicly and privately supported colleges and universities.

The presidents agreed with Ralph B. Draughon of Alabama Polytechnic Institute that the Federal Government should work through the states in granting financial assistance to the schools. They opposed a direct relationship between the government and the individual institutions.

Although there was some disagreement over whether the federal money should be used only for new construction or for instruction also, the presidents concluded their press conference by agreeing that expansion of present college facilities should be the basis for allocating aid to institutions. This point of view was endorsed by President Elmer Ellis of the University of Missouri who said he didn't believe federal aid should be given to schools that refuse to expand.

Much of the impetus for getting the federal aid resolution passed was stirred up by President C. Clement French of Washington State University, also outgoing president of the Association, who told delegates they must take "a new look" at the kind and the amount of federal aid they are getting.

With the tidal wave of students already sweeping into the colleges, he said, "I am increasingly convinced of the urgency of the situation. We are far from ready and I think it is inevitable that before we shall be ready we shall see widespread denial of educational opportunity to young people."

The building needs of higher education—an estimated shortage of $33 billion—"must be substantially a federal solution and not a state

New Ideas Being Put to Work in the Schools

- **In Kalamazoo, Mich., a penmanship expert has been hired to give teachers training in how to teach handwriting.**
- **The Washington, D. C., school district has hired "lay readers" to correct English compositions and make it possible for teachers to give more writing assignments.**
- **The University of Dallas, in Texas, is undertaking an honors program in liberal arts—more work in the libraries, fewer hours in the classroom.**
- **Minneapolis has decided to award three kinds of high school diplomas: minimum, regular, and honors.**
- **Kansas City is using ten members of the local Junior League as teacher aides in secondary schools throughout the city.**
- **Pittsburgh has set up a teacher exchange program with Carnegie Institute of Technology in that city. As a result, some Carnegie teachers are teaching in Pittsburgh high schools and some high school teachers are conducting college classes at Carnegie Tech as preparation for teaching college-level courses to talented high school students.**

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Federal Aid Sought

(continued)

one," President French declared.

At the same time, he criticized the type of federal aid that was being given at present. He described this as often "compounding our problems rather than relieving them. At a time when we face the increasing problem of numbers of students, much of the federal legislation is being given to encouraging additional numbers of students."

This is being done while the government refuses to take any action which would enable the colleges to financially handle the increased enrollments, he explained.

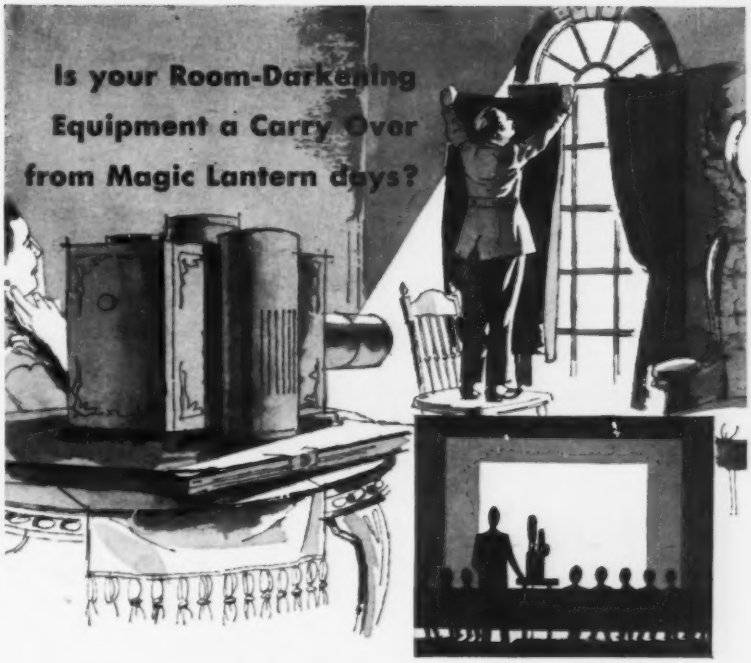
French's criticism referred to provisions of the National Defense Education Act which set up a system of loans to college students. Largely as a result of the Act, a record number of students are attending college this year on the cuff. Office of Education estimates place the total at 121,000 students, or 5.5 percent of full-time enrollment in U. S. colleges.

The presidents hastened to point out that this was not a solution to counter the increasing costs of higher education. "It will deprive many students of equal educational opportunity since the best way to keep many good students out of college is to force them to borrow money," warned University of Wisconsin president C. A. Elvehjem.

University presidents were unanimous in stating they were still interested in the good student who had no financial resources, and cautioned against forcing this type of student to go into debt for ten or more years after graduation.

President David D. Henry of the University of Illinois summed up the opposition when he stated: "We think a good student should be allowed to get a higher education without going too deeply into debt. If his family can't help him, and he isn't quite good enough to get a scholarship, he should be able to work his way through school. His expenses shouldn't be any higher than the amount he can earn by summer jobs and by working through the school year."

OV-272



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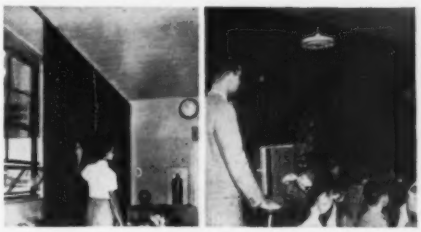

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Record Number Of Students View College TV Courses

COLLEGE-LEVEL courses offered for credit over television have shown a marked increase over last year, according to reports received from institutions in all parts of the country.

Heading the list is the nationally broadcast course in modern chemistry presented over NBC-TV's "Continental Classroom." By latest tally, 309 colleges and universities from coast-to-coast are offering academic credit for the course. This is 44 more than carried last season's atomic age physics course for credit.

The two-semester course is colorcast Monday through Friday at 6:30 a.m. local time. It is being taught by Dr. John F. Baxter. Atomic age physics is also being repeated by TV tape and kinescope Monday through Friday immediately preceding the new chemistry course.

• Bostonians sitting in front of their television sets can now take college credit courses for the first time in a Harvard University program. But they will have to stir out of their homes for occasional conferences at Harvard and for the final examination.

The courses will count toward the degree of Adjunct in Arts given extension students by the University. Two courses in the field of history are available—"European Imperialism" and "The Anatomy of Revolution."

• At the University of Arizona, three courses are being televised to conserve classroom space. The TV courses are in general chemistry, elementary Spanish, and survey of world art—all three of which had excessively large enrollments.

• In Florida, an elementary French course has been originating from the University of Florida in Gainesville and is broadcast over the state-owned microwave link.

• Through the extension division of the University of North Carolina, a full year's college curriculum is being offered by television correspondence study. The experimental program, extending over a 2-year period, began this past fall with courses in German and social science.

• In a second program combining television and correspondence study, the University of Wisconsin will offer graduate school credits to students in nine areas of the country. According to University officials this is the first time such a program has been tried on the graduate level. The course will be an advanced study of educational audio-visual methods, and will be sponsored by the school of education and the University's extension division.

The course, which will begin its broadcasts on Feb. 1, is being filmed at the University. Local, network and educational TV stations will carry the classes three afternoons a week for 15 weeks in Milwaukee and La Crosse, Wis.; Chicago; St. Louis; Lincoln, Neb.; Detroit and East Lansing, Mich., a large area of Florida, and Honolulu.

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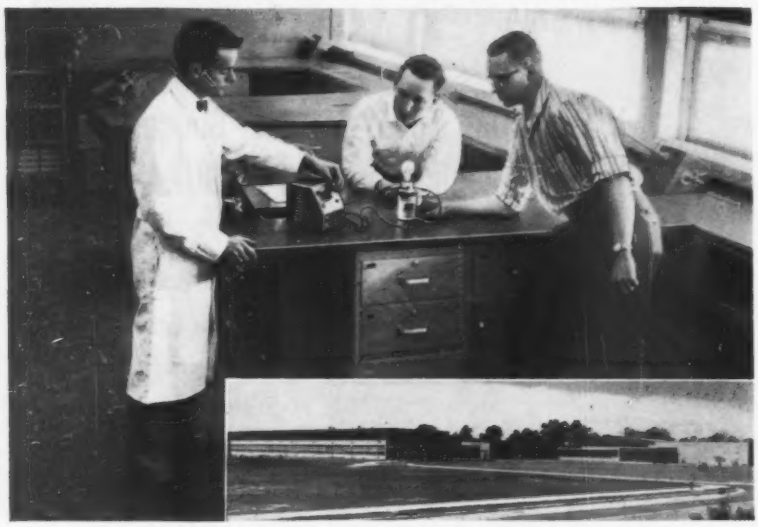

TEACHING WITH *Lab-Volt* — William W. Bohn, science department head, inspecting student experiment on conductivity of fluids at Edison Township High School, Menlo Park, N. J.

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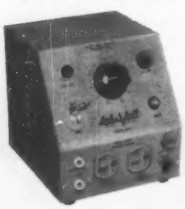

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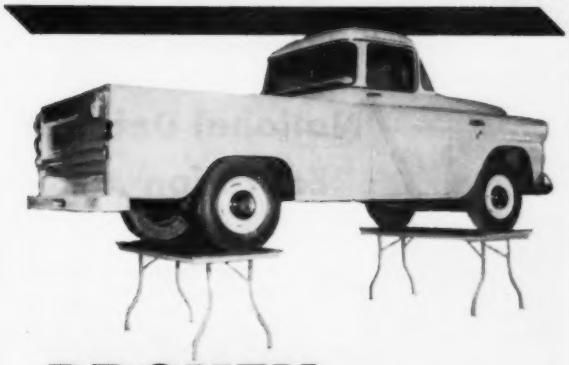

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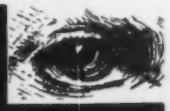

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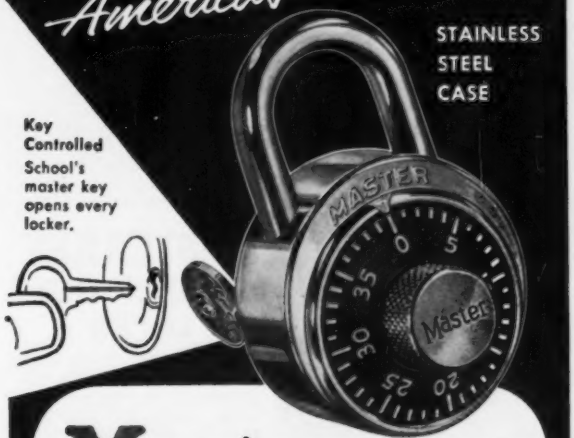

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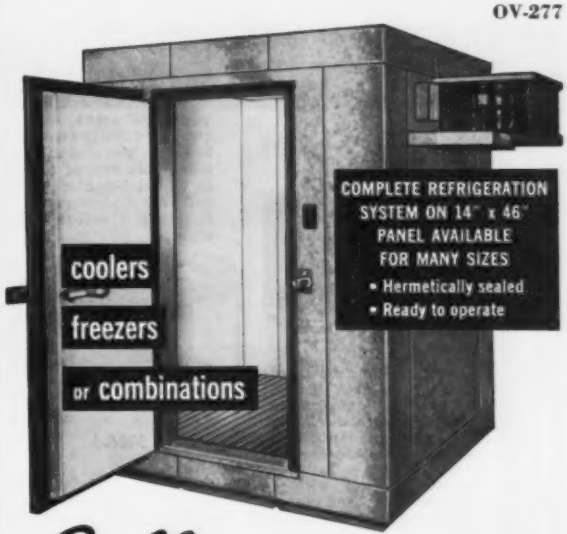

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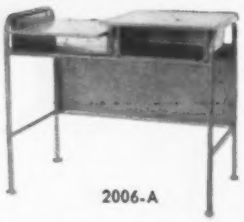

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Newton "House" Plan Overcomes Problems of Bigness

NEWTON, Mass.—This prosperous suburb of Boston has come up with a way to have its cake and eat it too.

This seemingly insoluble paradox has been solved in a new plan which enables Newton High School to enjoy all the advantages of a large school, and yet eliminates many of the problems caused by bigness.

In effect, Newton High is both a large and a small high school at the same time as a result of the "house" plan initiated this year. The school's 3,000 students have been divided into six individual "houses" of 500 students each. Students are together most of the time in their particular "house" under the direction of individual headmasters and counselors.

As Newton High principal Harold Howe II explains, the move was made because "when a school gets too big, it can become an awfully formidable place for kids."

It was estimated by Dr. Stanton Leggett, New York educational consultant quoted in the *Wall Street Journal*, that some 50 schools around the nation have adopted some form of decentralization in the past five years.

The same motive lies behind all the moves: a desire to do away with the cold, factory-like atmosphere often found in urban schools with enrollments running into the thousands, and at the same time retain some of the benefits of bigness.

AASA Gets Ready For Feb. 13–17 Conclave

WASHINGTON—Plans are practically complete for the 1960 convention of the American Association of School Administrators, according to AASA president Martin Essex. Theme for the meeting is "Creating and Coping with Change—Education," and emphasis will be on searching out new frontiers where educators of vision can discover adventure and progress.

The convention is slated for Feb. 13–17 in Atlantic City, N. J.

Top-name speakers at the nine general sessions will reflect this theme and several of their topics will be introduced in the group meetings for further study. Big subjects will be international relations, communication and public information, professional leadership, school finance and instruction.

In more than 100 group meetings, participants will hear debates, research studies, symposiums, panel discussions, case studies and interrogations of specialists.

School Fire Damage Decreases During 1958

BOSTON—School and college property losses from fire showed a marked improvement last year, according to a report recently released by the National Fire Protection Association. The dollar cost of fires in 1958 decreased by nearly 20 percent, but the total of damage and destruction still amounted to almost $24 million.

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New English Essay Exam Planned by College Board

NEW YORK CITY—A recently-revealed change in the form of the College Entrance Examinations might well be the forerunner to a drastic revision which will soon sweep the entire testing field. If the change does occur, it will complete the full cycle in testing theory.

The overwhelming preponderance of tests given today—whether college entrance or other aptitude and achievement tests—are objective. Multiple choice, true or false, or fill-in-the-blank, they all measure a student's mastery of the details of a subject. Many educators have charged that all a student needs to get good marks on this type of test is a willingness to work and a good memory.

They point out that the simple objective test makes no effort to test a student's ability to apply his grasp of the facts towards solving a problem.

And yet these now-denounced objective tests were the direct result of educators' pleas following the first World War for a means to measure a student's grasp of a particular subject. Thirty years ago it was the essay exam which was coming under fire as not serving as a true indicator of a student's learning.

Now it is the College Entrance Examination Board which has taken a big step back towards the essay test—in answer to current critics of testing techniques. The Board has approved a new test in English composition as an addition to the battery of examinations for college entrance.

Details of the test, or "writing sample," are now being worked out by a new Commission on English, which met in November for the first time. It is expected that the test will last an hour and require an essay of no more than three pages. Three copies of the essay will be made and sent unscored to three colleges of the candidate's choice. At the schools, the essay would be placed in the candidate's application file and used as a factor in determining admission.

Dr. Frank H. Bowles, president of the College Board, is hopeful of having the new test ready for use after the first of the year.

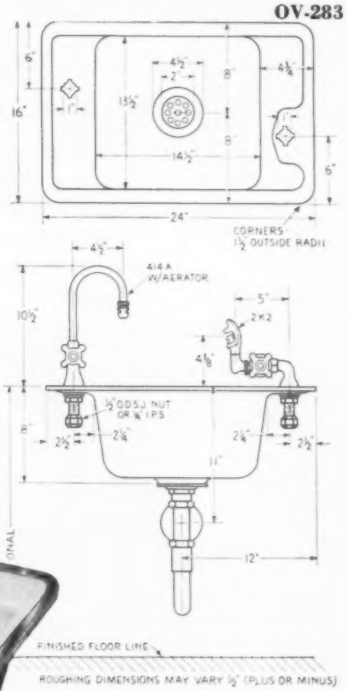
Michigan OK's Two-Year Graduate Education Plan

ANN ARBOR, Mich.—A two-year program of graduate study in education, leading to the degree of Specialist in Education, has been approved by the regents of the University of Michigan. The program is aimed at preparation of school administrators and other "non-subject matter specialists."

"Evidence of superior scholarship and high promise for professional achievement" will be required for admission.

OV-283

DECK TYPE FOUNTAIN "SPECS"?



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Meeting of the Month:

Chairman H. B. McCarty opens first meeting of . . .

Educational Broadcasters' Convention

DETROIT—The Russians know what they are fighting for, while we're in trouble "because we are so smug and complacent, and because we know we're so superior," Walter P. Reuther, president of the United Auto Workers, told delegates to the recent 35th annual convention of the National Association of Educational Broadcasters.

The labor leader was referring to his talks with Soviet Premier Nikita Khrushchev earlier this year. Calling for a new set of values calculated to "commit our resources to the advancement of important things," he exhorted delegates to redouble their efforts to get more educational stations on the air.

About 400 persons, representing 185 broadcasting stations, attended the 4-day meeting. Delegates participated in work sessions, toured local educational broadcasting facilities, and made a one-day trip to the studios of the Canadian Broadcasting Corporation in Toronto.

Mr. Reuther, in his talk to delegates, advocated that a specific portion of all commercial broadcasting facilities be set aside for educational purposes. To insure a maximum audience for such programs, he suggested that networks cooperate so that all of the educational programs could run at the same time.

He called the recently-announced educational airborne TV project "a

new and exciting tool," but warned that "we cannot permit people with banker mentalities to use such things as a substitute for teachers."

Several speakers at the gathering made this point. Richard Hull, manager and radio and TV director of station WOSU-TV at Ohio State University, stated that "television may supplement the teacher's instruction, but it can never give the pupil personal attention."

Representatives also heard addresses by John L. Burns, president of the Radio Corporation of America, and Leonard H. Marks, general counsel of the NAEB. Mr. Burns said that the modern technology of electronics has provided an opportunity for "massive upgrading in the quality of education."

Mr. Marks told his listeners that the Federal Communications Commission is currently holding clear channel proceedings "to see if they can't open some 23 AM channels presently operating at night with only one station."

Among other items of business was approval of a new constitution abolishing the positions of executive director and associate director. Under the changed rules, Harry J. Skornia, executive director, and Harold E. Hill, associate director, will become president and administrative vice president respectively.

Plans for holding 1960's convention in San Francisco were announced, along with a reminder that the 1961 meeting will be held somewhere in the Midwest. The 1962 convention will be held in the East.

Merit Pay Camouflage?

A ROSE by any other name is still a rose. But does that also apply to merit rating for teachers?

In planning its program for the coming year, the Western New York School Study Council gave top priority to a study by its Committee on Additional Remuneration for Exceptional Service to Students.

Objectives: to determine if merit rating plans should be developed for teachers, and the basic factors on which such systems should be developed.

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Dateline Washington:

Teachers Back Murray-Metcalf Bill

The National Association of Secretaries of State Teachers Associations, representing 1.1 million members of those organizations, has joined the National Education Association in urging citizens and political leaders to secure federal participation in the support of schools by enacting the Murray-Metcalf bill in the next session of Congress.

A statement released by the NASSTA attacked with vigor the "compromise proposals" advanced by those who hope to make at least a gesture in the direction of preserving schools in the face of an enrollment flood that seems certain to overwhelm them during the present decade.

Officials of the teachers' professional organizations struck out against the "federal debt service program for school construction" advanced by the Administration on three counts:

1. Loans to erect buildings avail the schools little if the classrooms obtained cannot be staffed with teachers;

2. The measure requires state and local school systems to submit to a "*great deal* of federal direction," not only by determining how their schools should be aided, but by making necessary modifications of present procedures for financing school construction;

3. The "federal debt service" method is one of the most expensive ways to help build schools. By spreading the federal cost of the school buildings over 20 to 30 years, the cost is increased by a carrying charge of approximately 50 to 75 percent.

Even if the Federal Government felt compelled to resort to a borrowing program for the schools, the secretaries contend it would be less costly if the government itself borrowed the money and made grants, instead of negotiating a "back-door federal borrowing program," the administrative cost of which would be tremendous.

The direct federal grants for school construction provided in S.8, a bill reported by the Senate Committee on Labor and Public Welfare at the close of the last session of Congress, were blasted almost as severely as the proposed loans. The measure was called a "2-year makeshift emergency bill that even its principal sponsors declared was woefully inadequate."

The Association pledged themselves to defeat any debt service bill before the next session, and to amend any school construction bill that does not give state and local school authorities the freedom to decide for themselves whether school

OV-288

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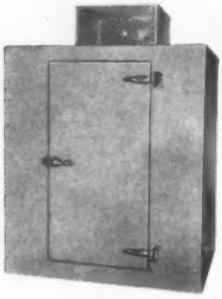

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LSCP-4 LoBoy Beverage Cooler

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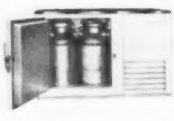

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buildings or school teachers have priority in the strengthening of school systems.

At almost the same time, 120 teachers from 50 states and Puerto Rico assembled in the annual "salary school" sponsored by the NEA. After a 2-day session, the "students" were given "final examinations," and awarded certificates of participation.

Attention was given to the salary status of teachers; the principles of salary scheduling; including advances based on recognition of merit; and the probable ability of the nation's economy to sustain the cost of quality teaching at a time of huge pupil enrollment expansion.

Members of the "faculty" of the school included the men who compile salary statistics and study practices in financing the nation's education, and economists who view a good school system as a part of the basic foundation of a country's sound financial position.

One of the latter, R. L. Johns, head of the department of educational administration at the University of Florida, pointed out that the average teacher income is only 63 percent of the average professional income. He called for an increase to bring into education those with intellectual ability and training at least equal to the average in the professions.

"Our nation is committed to free enterprise, competitive economy," he said. "Teachers are a part of that economy. Therefore, the quality and quantity of the teachers who serve our children have been and will continue to be determined largely by the competitive position which the profession of education holds."

Dr. Johns sees the American economy as sound and promising enough to uphold the high standard he advocates for the education profession. He estimates that public school revenues will total at least $30 billion in 1970–71. Predicting a national income in excess of $700 billion that year, he estimates that the required sum for schools will constitute only 4.2 percent of that amount.

The educator-economist had this to say to those who complain about rising tax schedules: "In terms of 1947–49 dollars, the per capita national income increased from $792 in 1923 to $1,740 in 1957." People claim that taxes are so high they have nothing left after paying them, but after deducting expenditures for all governments, the per capita income increased 77 percent between 1923 and 1957, he said.

Dr. Johns further pointed out that there is probably no expenditure that adds more to the total economy and to the standard of living than do expenditures for education.

According to Dr. Johns, the U. S. has adequate resources to provide the quality teachers and the kind of education needed at a time when internal competition demands increasingly higher levels of human skill, and competition with other countries makes a fully educated citizenry imperative.

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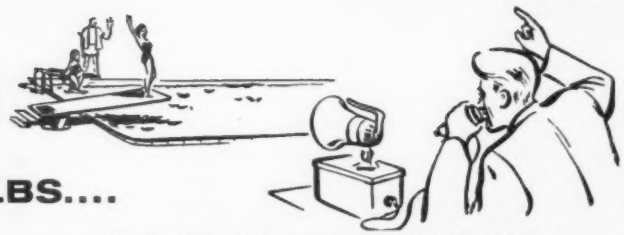

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HOW EXECUTIVES RELAX

Out of the Gunnison River and into the frying pan—Miller's catch for the day.

Bruce Miller's Mountain Retreat

This first-hand report by Riverside, California's superintendent of schools tells how he renews his energies each summer.

LAKE FISHING had always been a favorite sport of mine, but it wasn't until one day after the war that a friend who owned a sporting goods store offered to introduce me to the rudiments of trout fishing. Our present retreat in the magnificent wilds of western Colorado really dates back to that day.

It was a beautiful spring in Southern California. The heavy snows had been melted by warm rains. The streams were running swift and deep and the mountain lakes were cold and clear. I was looking forward to this outing with much anticipation, but when my friend said he would pick me up at 3:30 a.m. I thought he was kidding. He wasn't! We arrived at the lake just as the sky was beginning to lighten. From that moment on I knew I was hooked. I was shown how to rig up a rod, the importance of the leader, the hooks, the sinker and the casting, and was told to go to it. We threw out our lines and in what seemed to me to be no time at all came that zing of my line as it went out and my rod bent almost double. With instructions from all sides, I finally landed a beautiful 2-pound trout and gave a whoop such as I hadn't given since my exuberant college days. I had caught my first trout! My wife and two sons were astonished as I unwrapped the beautiful prizes that evening.

This was the beginning of many happy experiences for me, and it wasn't long before I left the lakes and turned to stream fishing. I soon found that it held additional satisfactions for the tired school superintendent. In driving an isolated road up a montain to a sparkling stream and taking it easy under the forest trees with a chosen degree of solitude, one finds what it means to retreat from strain and tensions.

Our first experience in the Gunnison River area was in 1949 on our return from a trip to the East. Western Colorado, with its steep-walled canyons and beautiful mountain-rimmed valleys, has some of the most spectacular terrain in the world. You can imagine, then, how we felt after crossing the rolling plains of Kansas and the dust-bowl areas of Highway 50 (where as far as you can see it is flat, yet you can't see out) to find ourselves in the mountains again where the air is dry and cool and the panoramic views are unbelievable.

We fell in love with the country and vowed to return someday. As luck would have it, however, several years passed before we could make it. I changed positions in the meantime and the boys took summer jobs. Vacations took us in other directions but we kept hoping for the day when we could return to the Gunnison River valley, and finally we did. My son David and I set up camp along the river. (Bob, the older son, was at Stanford by this time and unable to join us.) The fishing was terrific! David is a bigger ham than I, and with the Gunnison as our stage, we had a wonderful time. From time to time we journeyed on foot, far from inhabited areas, and often felt the beat of unpredictable weather upon us. At night we sat by the fire and listened to the wind in the pine tops and the river flowing near by. We looked through the branches to the stars and talked of many things. David and I grew much closer through this *camp*anionship. It is a thrilling experience for a father to realize, for the first time, that his son is almost a man and is ready and able to accept the responsibilities of adulthood. During this time we were able to capture our intrepid adven-

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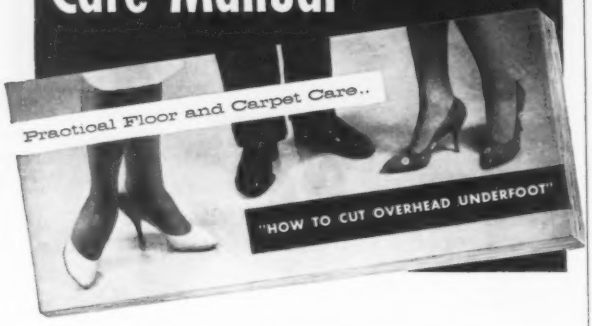
New Floor and Carpet Care Manual



This colorful manual will help you solve most any floor and carpet maintenance problem. It contains illustrated, step-by-step instructions on how to clean and maintain 10 different types of the most popular hard and resilient floors. It tells how to shampoo carpets; how to select proper equipment, cleaners, waxes, and finishes; how to treat common floor failures. It also contains suggestions on floor safety, tips on floor and carpet stain removal, and explains how to set up proper job time requirements and use work planning schedules.

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tures in colored motion pictures—beautiful scenery, fishing, food and camping scenes. This was the beginning of the "Gunnison Saga"—one of the favorite possessions of the Millers. Each summer we add another chapter.

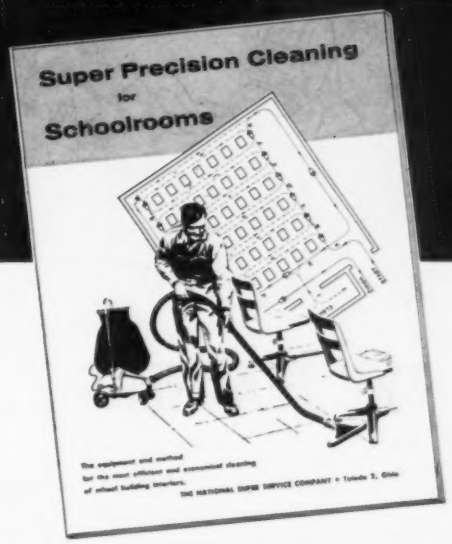
In the meantime (back at the ranch, so to speak) my wife's dislike for camping was exceeded only by her desire to be with her men, and the next year she decided to accompany us. By the way of compromise, we rented a cabin in a primitive area which offered a few more comforts of home to my civilized wife. Sally was delighted with the country and we decided that the Gunnison River was the place we would like to spend all our vacations. We then made the momentous decision to have a place of our own with more adequate facilities and found what was to be the family vacation spot in a cabin in a nearby town.

This little town, while thriving in the summer, is practically a ghost town in winter. It is an old mining town where early prospectors hunted for gold, lead, zinc and coal. Their burrow trails have now been widened by bull dozers, and modern prospectors hunt for uranium by jeep on these same trails. It is perfect country for "jeeping" and, yes, we have one too.

Bob and David are grown men now and are married to lovely young women. Both couples have spent their vacations with us here the last several years. This past summer found us firmly established in our mountain retreat. We spent hours on the river enticing the wily trout to bite, or jeeping along the rugged trails without a care in the world. In August, as the final days of our vacation drew to a close, I stood and contemplated the grandeur of the valley and the peace and well-being it had brought us. My heart filled for a brief moment as I felt that here in this part of the world there is still room enough—and still time enough. Here, away from the sounds of the city and the obligations of office, a man can recharge his spiritual batteries.

OV-297

How to clean a schoolroom in 7 minutes!



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DON'T PITY THE TEACHERS . . .

by Richard H. McFeely

DON'T PITY THE TEACHERS! I keep thinking this as I read about the present plight of teachers and schools. During these days when so much is said and written about inadequate salaries for teachers, the critical shortage of trained teachers, the "educational slums" that have been created by lack of support of the schools, the overcrowded classrooms, it is easy to overlook the most serious results of these conditions.

Never before has there been a greater need for men and women educated for intelligently planned, cooperative action, directed toward overcoming those barriers of ignorance, prejudice, selfishness and misunderstanding which prevent men from realizing the One World which exists as a physical reality today. Failure to fulfill this need will lead to the destructive use of atomic energy or of a combination of gas and bacterial warfare.

The only power known by which to prevent such suicidal warfare is the creation among men of a moral power based on good will toward one another. Surely an attitude of friendship is born from the knowledge that in our independent world the welfare of each is best served when the welfare of all men everywhere is at its highest level. The question we face, therefore, is whether the home, the schools and other agencies in the community can educate effectively enough to produce men and women of good will so that education will win the race.

To answer this question affirmatively schools, homes and community agencies of all sorts must educate so that children learn the science of human relationships and master the art of getting along together. The big educational job right now is to help boys and girls learn to live decently with the people in their neighborhood, their city or town, the state, the nation and the rest of the world. The concept of brotherhood must become a vital one in the lives of all of us.

Never has a greater responsibility rested upon those of us who guide the growth of boys and girls. The people of the United States rest their hope for the future on education, however poorly they may support their schools. They believe that by building a sound foundation of understanding and good will we will achieve the domestic and international cooperation essential to peace and to fuller, richer lives for all of us. Such cooperation is the only alternative to the utter destruction of our civilization, whether from the "termites of democracy" or from catastrophic war.

To achieve these important educational goals, as well as to help "Johnny read" and prepare him for college or a vocation, requires that schools have well-trained teachers and administrators and an adequate educational environment. What an indictment of our society that the richest, most prosperous nation in the world should have to admit to such problems as lack of financial support, inadequately trained teachers, too few classrooms and school buildings. We can have the kind of education we are willing to pay for. The kind of education which we must have cannot be purchased at the bargain counter.

So I say, don't pity the teachers, though they surely deserve our understanding and help. Pity the children who are bearing the burden of these conditions. Two million or more children will suffer a major impairment of their schooling because of poor teaching. Millions more will receive an inferior education because of the inadequate supply of good teachers. Millions of others are finding that schools are dull places where external rewards must be provided as incentives to learning. They are finding that learning is not rich and joyous in itself, but that it must be rewarded by prizes, that it must be forced by threats of "being kept after school" or of "not being promoted."

Yes, let us pity the children. Let us also pity their parents. Most parents

---

Mr. McFeely is principal of George School, a private high school in Bucks County, Pennsylvania. This item originally appeared in his school's bulletin.

are ambitious for their children. They realize the need and value of a good education. They realize that without sound education their children will be handicapped, less able to achieve personal integration and happiness and hampered in their efforts to work for the good of the community, the nation and the world.

Let us pity the children and their parents. Let us also pity those communities and the nation doomed in the future to the poor, inept leadership which will result from schools taught and administered by unskilled and poorly trained teachers. Let us pity the communities and the nation confronted with great social problems, needing well-informed, intelligent citizens, and yet forced to get along with millions who are poorly trained, indifferent, and unable to act effectively for the common good. Don't pity the teachers. They can find ways to help themselves.

Let us remember that in our interdependent world the welfare of each is affected by the welfare of all. The depression of the 1930's showed us that we cannot have economic prosperity for an individual or a small group unless there is adequate distribution of material goods to all groups. We know we cannot be free from disease while disease is unchecked in other areas of the world. Crime that is bred in depressed areas knows no geographical boundaries. Poverty and destitution provide the breeding ground for discontent and active seeking for a better way of life wherever and by whomever it may be offered.

There are things we can do, which is fortunate for our mental well-being as well as for the children who are affected. We can work for increased salaries and other employment benefits for teachers. We can encourage men and women of high calibre to enter the teaching profession. We can support programs to improve school buildings and equipment. We can work toward the goal of equality of educational opportunity for all children regardless of race, color, creed, or any other circumstances. We can become informed about federal financial aid to schools in areas of the country where improvement cannot be made without such help. We can take an interest in our local schools, work to provide more and smaller classes, an improved curriculum and better working conditions for the teachers. These are but a few of the things that come to mind when I think of the needs of American education and the relationship that we, as concerned adults, have to it.

Don't pity the teachers! Pity the children! And let us devote more time and effort to improve the conditions that result in intellectual and spiritual starvations for so many of our nation's children—America's most precious resource.

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